

MASSACHUSETTS PLOUGHMAN



JOURNAL OF

AGRICULTURE

VOL. LXIII. - NO. 16

BOSTON, MASS., SATURDAY, JANUARY 9 1904

WHOLE NO. 3232

MASSACHUSETTS PLOUGHMAN
Official Organ of the N. E. Agricultural Society.

MASSACHUSETTS PLOUGHMAN PUBL. CO.
Publishers and Proprietors.
ISSUED WEEKLY AT
NO. 5 STATE STREET,
Boston, Mass.

TERMS:
\$2.00 per annum, in advance. \$2.50 if not paid in advance. Postage free. Single copies 5 cents.
All persons sending contributions to the PLOUGHMAN for use in its columns must sign their name, and necessarily for publication, but as a guarantee of good faith, otherwise they will be consigned to the waste-basket. All matter intended for publication should be written on note size paper, with ink, and upon one side.
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The Popular Jerseys.

In the establishment of this breed on the island, from which it takes its name, the work was conducted very systematically to produce uniformity of type and bovine beauty. In establishing the ideal, two representative animals were chosen for excellence, and the scale of points adopted was made a combination of these. The early breeders adhered very closely to color, markings and type, but the modern breeder has lessened the attention towards these by breeding more strictly for utility as a butter producer.

The foundation stock for the Jersey represented chiefly by those on the island at the present time are noted specially for the deer-like appearance of their heads, fine, slim necks, light shoulders, deep through narrow fore quarter, large bodies with abundant capacity, lean hindquarters, and more particularly for the hindquarter appearance of the udder in its fullness and placing of the teats. Since the introduction of a system of testing, the indications which give power of production have overlaid to some degree the fine discriminations which existed as to the general color and markings of nose, tongue and switches. The modern type may be of broken color, or lack in the fancy points referred to, but it has the ability for larger butter production more intensified, as the frame is inclined to show more strength and the general form more ruggedness of constitution. While the type should show the angular form which is conducive to the highest butter production, yet those features which contribute to beauty, the head and neck, should not be wholly without the gracefulness so characteristic of the breed.

The illustration, reproduced by permission of Secretary C. J. Bell of Vermont, depicts a scene on the Billings Farm at Woodstock, Vt. Some of the animals in this herd are to be shown at the St. Louis Exposition.

The Manure in Winter.

On well-manured farms the manure is no longer thrown out of doors to freeze up or waste from the effects of the weather. This method, wherever practiced, makes more work in drawing, as well as reduces the value of the manure.

Quite a proportion of the large dairy barns in Vermont have stables well enough to admit of holding the manure for several weeks at a time. This is a very convenient arrangement so far as labor is concerned, but it may not be the best in other ways. Where it is practicable, there should be plenty of room and some system of ventilation adopted that will insure a good atmosphere. I think that this can be done by having ventilating tubes or flues extending from near the floor next to the back side of the stable and extending up through the roof. From our own experience, such a system appears to work well, and there is very good air in the stable.

But where manure is thus kept in the stable, it should be frequently removed. Some practice drawing every few days, and this will prevent any large accumulation and be more satisfactory every way. Some farmers object to having manure in the stable, but keep it either in a cellar underneath or in a building adjoining. This adds to the labor of cleaning the stables, but does away with the objection of having the manure in the stable.

As to what to do with the manure in winter, the practice is now very generally in favor of drawing directly to the field where wanted and spreading at once. This method is being followed more and more as the years go by. At first there was a good deal of opposition to this plan, as the writer well knows, but after the experience of years it is coming to be understood that the supposed loss from such practice is indeed small, if any, while the advantages are altogether in its favor.

It used to be the practice to draw and put in small piles—four to six to a load—where wanted, and then spread in spring, but this was a very poor method and very few instances are noticed where this is now done. Where the manure is spread as drawn, the work can be well done and then as early in spring as practicable, without the previous hauling of manure on the ground, the other spring work can be attended to. There may be some locations where it would not be advisable to spread manure in winter, but farmers can determine this for themselves.

Some of the manure may be too coarse or strawy to spread on the surface and harrow in to advantage. Such would be better plowed under. Again, some farmers may prefer plowing under manure for certain crops, as corn, for instance, on greenward just before planting, when there will be quite an amount of vegetation to turn

under. In this case the manure can be drawn and spread during the winter and up to any time before plowing, but the earlier the better, as it would then become well pressed down among the grass roots by snow and rain, and thus produce the best results.

Where this method of drawing and spreading the manure is practiced, so long as the snow remains on the ground, there will not be any large amount to move in spring, and the usual work of the season will be thus far advanced.

Franklin County, Vt. E. R. TOWLE.

Success with Field Peas.

At the present time the Canada pea is being grown to perfection and unmolested by the "bug" or weevil that has so long devastated this product over here in the States. At the same time, serious apprehension exists among Canadian farmers that they will be obliged to abandon the cultivation of this product, owing to the injurious effects of this pest, where for many years it has proved one of the most profitable crops for commercial purposes. Consequently, may it not be well for farmers on this side of the "line" who practice a mixed system of farming to include the field pea as one of the staple crops in their farm rotation. The fact is in its favor also that with many nearly or quite all of their corn at the present time finds its place in the silo.

The past and previous year's experience in growing this crop has encouraged me to believe that for feeding to hogs intended for the earlier markets it has no superior. Its early ripening makes it available for feeding four to six weeks before our corn crop is sufficiently matured for this purpose. Seemingly, no other crop requires more simple or easy methods of cultivation, or is attended with so little expense until time of harvest. The conditions of soil most favorable for its growth seem to be those naturally adapted for growing corn, and where some hood crop had been grown the previous season.

Prepare the ground and sow the seed, two bushels per acre, with drill as early in the season as it can be well done, at the same time using 150 or 175 pounds phosphoric acid phosphate per acre. The ground should then be well rolled down, thus leaving it smooth and free from lumps and small clods, which treatment will be found to contribute much to the convenience and pleasure in the work of harvesting.

To prevent shelling, harvesting should be done before the grain becomes overripe, using the old-fashioned, wooden revolving horse-rake, if one is so fortunate as to have one, if not the old way of rolling into bunches with the scythe can be resorted to, or in other instances it is said that the mowing machine can be profitably used. The horse-rake being used, one should commence on the side of the field where the rake will run opposite the direction the vines naturally lean or lodge. The limit of each raking should be the size of an ordinary forkful, and the return bout should be over the ground last raked, at the same time moving each raking just far enough to loosen the vines remaining underneath. A man following with a fork moves each one a few feet away, when all is ready for another "bout." From four to six acres can in this manner be easily harvested per day. When sufficiently cured they are usually drawn and stacked at some convenient point for feeding. But a more economical course it seems would be to thresh with machine designed for the purpose, as in Canada, thus preserving and utilizing the vines for feeding to sheep and horses more especially.

Another important feature connected with the cultivation of this crop is worthy of notice. It is well known by those of experience that with the other crops that are usually followed by winter wheat it is seldom that as good results are attained as those when preceded by the field pea. Its early maturity allows ample time, the mulch of vines aiding materially in preparing a seasonable and perfect seedbed. This fact, together with its acknowledged ability as a nitrogen gatherer, partially explains, and suppose, why the field pea is so favorable in its effect upon the following crops.

IRVING D. COOK.
Genesee County, N. Y.

Cheese-Making on the Farm.

I take pleasure in preparing for your readers the following account, which will, I doubt not, be of interest to many, although I repeat to some extent the points mentioned in my recent address given at a New England dairy meeting. The home industry of cheese-making should be encouraged. It has become almost a lost art on the farm, so few people being found who understand the method of converting the milk into that delicious substance called "farmer's" cheese.

Creamery butter grows more and more popular and commands a higher price than that made on the farm. But not so with factory cheese; for but few people can be found who do not prefer the domestic cheese to that turned out at the factory. It was desired to call the attention of dairymen to this fact, believing that many would engage in the business if they understood the method and knew the profit.

Very few farmers can afford the apparatus for cheese-making which factories have and must therefore labor at a disadvantage to obtain as good results. It would not pay to set up a cheese factory at home, but it has been proven that good cheese can be made and cured on the farm with but little outlay at the beginning.

GOOD SUCCESS WITH OLD METHODS.

Our method of making cheese will, without doubt, seem old fashioned to up-to-date cheese manufacturers, and so it is. We

know nothing of the modern way except by reading, and we learned the same process our grandmothers used. But as the cheeses proved good and very salable, and knowing no other way, we have continued in the same routine trying each year to improve by experience.

Formerly all cheeses made were kept at least a year before being placed on the market, but now new cheese is in more demand and yields more profit to the maker.

PROFITS FROM SPRING MILK.

Few farmers' wives in New Hampshire make cheese, but if they realized that they could make from thirty to fifty per cent. more by so doing than to make butter, they would be ready for a change. Butter is usually low in summer and especially in late spring, but cheese can be made then the best of any time.

One must expect some failures, but do not get discouraged. Watch the process carefully, noting what effects certain conditions of the milk or curd have on the cheese and avoid making the same mistake twice if possible. We will give one process of

taken from the press, and rub and turn them every day until cured. If very soft blind with thin cloth, but usually this is not necessary.

CURING.

A small cheese from eight to thirteen pounds can be cured enough for home market in from three to six weeks, and is usually more profitable considering the work, but larger ones are better if to be kept several months. Keep the curing-room as cool as possible and free from insects. Lining the room with building paper and ceiling it is quite effective, but a cold air duct would be better. This duct should be placed deeply enough in the ground and long enough to cool the air decidedly before entering the room, thus reducing the temperature materially. Tubs of ice placed in the room during a very hot period do considerable good. If your cheese melts, my advice would be to sell as soon as possible.

MAKE THE BEST.

Do not make the mistake of thinking any milk will do for cheese. Keep cows that



SCENE ON A VERMONT JERSEY STOCK FARM.

See descriptive article.

making in detail, as it may interest and benefit some.

THE OUTFIT.

The utensils used can often be found in some attic where they were placed years ago, and whose present owner will either give away or sell for a small sum. If one cannot afford to buy new these can be renovated to answer very well. As with all good dairy products, the foundation is a healthy cow in sanitary surroundings, well fed and well cared for, yielding her milk to a clean milkster into clean utensils. This costs but little and should never be neglected.

THE PROCESS.

As soon as the milk is brought from the stable it is strained into a large tub, preferably tin, and stirred until the right temperature, from 84° to 86°. The rennet, such as our grandmothers used, has been almost entirely superseded by rennet tablets, which can be bought by the dozen or hundred, and are always of uniform strength. The present way is much easier and safer.

Dissolve these tablets, using one No. 2 tablet for each one hundred pounds of milk, in cold water, and pour the solution into the milk, stirring vigorously for two or three minutes. Cover the tub with cheesecloth and let stand until firm, which should not be over forty minutes. If the milk thickens too quickly add less rennet. When firm, cut with wooden slices in two-inch squares, and leave covered over night or until the whey rises on top.

Place the draining basket which may be of tin or wood over the whey tub and dip the contents of the milk tub into this cheesecloth placed thereon. Stir occasionally until quite dry, after which it is cut in thin pieces into the milk tub and warmed with water or whey to 88°. The length of time for scalding the curd has been a point much discussed, but it is generally conceded that twenty-five to thirty minutes at 98° or fifteen minutes at 100° will give the best results. After the scalding, it should be again placed in the basket and drained, then cut with knives or curd grinder and salted. The amount of salt used is also a much discussed question. Some makers claim that too much salt will make cheese hard and poor in quality, others, that an extra amount should be used in very hot weather to prevent the cheese from melting. Experience has taught us that five ounces to each one hundred pounds milk is a good rule, using a little less in cool weather and a trifle more when very hot and sultry.

After the salted curd is placed in the hoop to press, no weight should be used for at least one hour; after that a gradual pressure for several hours and the heaviest weight the last twelve hours.

We usually have the cheese in press about 2 P. M., and take them out to turn just at night. The work can be finished in less time, but at a loss in the quality of the cheese.

I find the thinnest bleached sheeting the best for press cloths. Care should be taken that these and the draining are kept clean, and all utensils used scalded daily. The hoops may be of tin or wood, and the presses as cheap or expensive as one wishes. I prefer tin utensils where possible.

Prepared sage may be used to flavor a cheese, but the green leaves are for making "premium takers." Be careful to rub the cheese all over with butter or lard when

give good, rich milk and put all the cream in. Skimmed milk will prove a poor investment. Make a good article, ask a fair price, consult the tastes of your customers, and a good profit from your dairy herd will be your reward.

MRS. NATHAN B. COX.
Ashland, N. H.

Farm Hints for January.

THE MANURE PROBLEM.

A very important part of the work at the barn in winter should be the care of the manure. The idea should be to make as much as possible, care for it properly, and apply it to the land when and in such manner as will insure the most benefit to the crops and soil. In this Northern climate stock isor should be kept in the barn most of the time during the winter, and for this purpose the stables should be so constructed as to be the most comfortable for the animals and convenient for those having the care of them. When these conditions prevail, a large amount of manure should be made during the winter. If all of the animals are bedded, as they should be, the amount of manure will be considerably increased.

GETTING LUMBER.

The farmer who has sufficient hemlock, spruce or pine for his own needs may consider himself fortunate, and he should care for and utilize it to the best advantage. If there is any building or repairing to be done, having the lumber or timber for the purpose will be a great advantage, and particularly so now when prices are so high. There should always be a supply of such kinds of lumber as are likely to be needed about the farm on hand and properly cared for. There is nothing like being independent in this matter, and it is money in the pocket for the careful farmer. Along with the rest, have some hardwood timber or lumber for the manufacture or repair of beds, stone boats, or for whatever else it may be needed on the farm.

During a few years past there has been considerable cutting of sugar orchards in whole or in part. This has generally been on account of the destructive work of the forest tree worms a few years since. Where these pests have worked for one or two years the effect has been to greatly injure or kill outright the sugar maples, and in such case the trees soon commence to decay, thus necessitating their removal at an early period. The good orchards should be well cared for, removing the unproductive trees, in this way giving the others more room and encouraging the young growth of maples if such there be. No evergreen trees should be allowed to have a place in a sugar orchard as they are a decided disadvantage.

VERY USEFUL WORK.

Not much snow has fallen in many localities, and a good deal of outdoor work can be done aside from the chores and the woodlot. A task that calls loudly for performance on many farms is to clear up the pastures and fence rows of bushes and useless trees. They will sprout freely if cut now than if attacked during the growing season, but with many farmers it is a case of now or never. Evergreen trees will, of course, not sprout under any conditions. Many pastures infested with small savins, dwarf juniper and pines would be much the better for the use of axe, bush hook and torch.

The junipers can be burned without cutting, and the boys enjoy the task. Cut the pines close to the ground or the lower limbs will live and grow. While clearing off the foul growth the walls and fence should be inspected. Probably some of them were injured by nutting parties, hunters and other trespassers, and most of the repairing can be done at this season.

THE ORCHARD.

Tree pruning is in season in good weather. The young fruit trees in particular should not be neglected, since a very little attention every year will keep them right, while a wrong start cannot easily be repaired. It is a simple matter to go over the orchards neatly cutting and sawing away the interfering, deformed or overcrowded growth, keeping the tree shapely, open and well balanced.

THE HOMESTEAD.

Shade trees about the house should be trimmed of dead, broken wood and the litter beneath taken away. Take a good look at the fences and gates around the barn lot, and do what is needed. A supply of extra posts should be got out from the woodlot. Some farm premises have a vast amount of rubbish lying around in the shape of old wheels, worn-out machines, old carts, wagon bodies and the like, which give the place a shiftless look, and which are mostly of no value, except perhaps at an auction, on which occasions there is always somebody who will bid a few cents for any sort of rubbish. Many a farmer who would become very angry or demand a good price for storage if a neighbor should dump such stuff on the premises, will inflict the nuisance upon himself for years and buy more rubbish at every auction. There is, of course, always the chance that some of it will be useful in making repairs, but the possibility is really not worth the nuisance. That which is valuable should be provided shed room. The rest, after taking out good bolts, braces, etc., should go to the woodpile or the junk dealer. Speaking of junk, it is likely that the blacksmith will pay more for the scrap iron than will the traveling junk buyer. It takes some nerve to clear up the accumulated rubbish as it should be done, but the result will brace up the owner and increase his self-respect.

PAINT AND REPAIRS.

A good piece of indoor work for stormy weather is to oil or paint the farm implements and wagons. Crude petroleum is good both for iron and woodwork, using two coats for the wood. If paint is used, don't buy the cheap ready mixed stuff sometimes urged for sale, but choose good lead and oil and mix or have the local painter do the mixing to order. If buildings are to be painted soon the scraping may be done any time, and the blinds taken indoors and scraped and painted.

GET MORE ICE.

Large quantities of ice were cut last month, and considerable more will be put away in January. Some small ponds will be cut over twice. To secure quick freezing turn off the entering stream as soon as the pond is full, thus keeping the water still. The harvesting should be done when the weather is fairly cold, so that the cakes will go dry into storage. The ice should never be dumped in a heap, but packed with reasonable care to avoid air holes.

THE POULTRY YARD.

Have the roosting place snug, warm and not too large. At night, warmth in winter is more important than ventilation, but the fowls should be in the open air about all day, unless the weather is stormy. Where snow has fallen, it will pay to clear off a space in front of the houses or to dig a path to the covered farmyard or manure shed. To get eggs, feed plenty of animal food and hang beets and cabbages where the birds can pick at them. Have the litter dry and at least four inches deep on the floor and feed all the whole grain in the litter. Those who sell eggs for hatching will begin to have quite a demand for incubator eggs in February and should see that the breeding hens are sorted and mated this month. Eggs kept in a good cellar will hatch well three weeks after laid, so that eggs may be saved quite a period ahead of the expected sale. It is not necessary to turn them daily while in storage, as sometimes advised.

During the usual periods of freeze and thaw in quick succession, such as often occur the last part of the month, there may be some trouble from roup. As a general thing it does not pay to doctor a sick hen. But roup is more easily controlled than most diseases. The main thing is to keep it from spreading by the sick ones as soon as they begin to wheeze and show swelled heads or discharges about the face. Put them in a dry, sunny room. Many preparations are used for treatment, but kerosene applied to the head part and passages with a fountain-pen filler, is simple and as good as anything. It will help the mild cases recover. The severe cases, whether they recover or not, are seldom worth keeping afterwards.

THE PEST OF RATS.

Prevention is the first step, and consists in keeping the grain in rat-proof rooms and chests. Loose grain in boxes or scattered about the floor is a standing invitation to the rats of the neighborhood. They travel about extensively at night, and soon learn where food is convenient. If rats are plenty, they cause many kinds of damage and render chicken raising a discouraging attempt.

Poisons are unsatisfactory because they usually kill only enough rats to make a bed smell about the buildings. Paris green in cornmeal covered with unpoisoned meal will kill a few, and white arsenic is eaten somewhat more freely, but all poisons are dangerous to use and not really effective. There is a patent preparation that gives

sore feet to rats which step in it, and sometimes drives them from the buildings, but it cannot be used where other animals may come. Good cats will catch many of the rats, and should be kept in the barn and sheds at night. Terrier dogs or ferrets will often do good work where rats are very numerous.

Under ordinary conditions, however, a spring trap properly set will do the most thorough work. A few days previous to beginning, throw down some chaff and fine litter near the holes where the rats appear. Set the traps at evening after shutting away cats, dogs and fowls. Set very lightly bait with corn or meat and cover in the litter. Remove rats caught as soon as possible. In some locations the traps may be left through the day, setting them inside a box with enough meat and chaff in it to cover the traps. Locations of traps should be frequently changed. Use traps with three-inch jaws, a moderately strong spring and fasten with a chain. There should be no oil paint or bright metal about it. Some recommend oil of rhodium to be put on the bait, but it is costly and apparently of no special use.

The Rhode Island Club.

At the annual meeting of the Rhode Island Red Club, held in Lawrence, Mass., Dec. 10, the following officers were elected: President, Hon. C. M. Bryant; Vice-Presidents, Dr. N. B. Aldrich, Thomas Hollis and D. P. Shove; Executive Committee, Dr. N. B. Aldrich, P. R. Parks, H. W. Gunstan, V. L. Stafford, George P. Coffin, C. M. Bryant and W. J. Drisko; Secretary and Treasurer, W. J. Drisko; Honorary Vice-Presidents, I. F. Clark, Maine; L. Robbins, New Hampshire; S. Daniels, Vermont; J. Crowther, Massachusetts; C. M. Allen, Rhode Island; R. C. Tuttle, Connecticut; C. Smith, New York; A. C. Richardson, Indiana; F. L. C. Morse, Illinois; D. J. Martin, Kansas; C. C. Reid, Ohio; L. L. Conn, Michigan; H. C. West, Iowa; R. Rowbotham, Utah; R. F. Smith, Missouri; D. H. Funston, Pennsylvania; E. B. McNair, Delaware; A. C. Harris, North Carolina; A. H. Ruelle, Washington; J. M. Maxwell, New Jersey; R. McC. Griffey, Maryland; W. A. Shepard, Colorado; A. G. Searing, Wisconsin; E. R. Holman, California.

The executive committee were instructed to procure for the coming season suitable club ribbons to be placed at their discretion among the various poultry associations and open only to members of club members in good standing. It was also voted to authorize the executive committee to issue a club catalogue, containing a list of members with addresses, the standard adopted by the club, as much general information on the history, development, characteristics, mating, breeding and judging the breed as seems advisable and as much advertising matter as possible. On motion of Vice-President Reid of Ohio it was voted to instruct the executive committee to arrange for a special for the St. Louis Exposition. Mr. Reid gave \$10 as a starter for a subscription fund.

President Bryant's report regarding the steps already taken toward the admission of the single comb Rhode Island Reds to the standard was very encouraging, and the hope was expressed that there would be a large entry of the single comb Reds at Rochester at the next meeting of the American Poultry Association.

The meeting was well attended and a great deal of enthusiasm was manifested. Members reported excellent sales, and it was generally agreed that the outlook for the coming season was better than ever before. The Rhode Island Red fever seems to be raging in the West and South, and New England is having a relapse. At the large New England shows already held, the Rhode Island Reds have been one of the largest, and in many cases the largest class shown. The club membership now numbers 183 and includes the most progressive breeders in the country.

W. J. DRISKO, Secretary.

Producing More Fodder.

We have demonstrated the possibilities of the soil here at the university farm in feeding corn enough on three acres of land to feed six cows an entire year if they did not get pasture a single day, setting their daily ration at eight pounds, which is the average. This, of course, was high farming, and the crop was grown by liberal fertilizing.

We have taken another instance of nine acres of worn land that was producing less than one-half ton of hay to the acre, and by fertilizing with nine hundred pounds of chemical product, and using no cattle manure, have grown upon it the first season by good tillage corn for ensilage sufficient for nine cows an entire year. What has been done with that nine acres can be done with most arable lands in the State.—Prof. G. M. Gowell, Orono, Me.

Getting at the Immigrants.

Hired help is likely to be rather scarce still another season, although the supply will probably not be so extremely scanty as during the past year. Some relief might be obtained by employment of immigrants, provided farmers are given a chance to hire them.

Plenty of excellent farm hands have been arriving with every shipload from Europe, but there is nobody to tell them how to get farm work, and those who have no friends in the country are likely to accept the first work that offers instead of going to the country where their previous experience would naturally direct them. Some way should be devised for getting the farmers into communication with the newly arrived farm workers, either through the agency of the Department of Agriculture, or a special farm employment bureau.

Dairy.

Butter in Quiet Demand.

While the arrivals of fresh-made butter are not excessive, the market is still depressed by the large stock in storage. The only sign of improvement is a slight advance in price on certain large sales of storage butter, which would indicate that the supply is being satisfactorily reduced under the prevailing market. Some of the best storage stock is about as good as the bulk of the fresh made at this season, and the popularity of the held butter seems to be increasing. The lower grades of all kinds sell hard at present. The class of trade which will knowingly buy an off-quality butter is limited, and particularly so in fairly prosperous times.

Chapin & Adams: "The market is unchanged from last week, and so far as present signs go is likely to hold about so for the present. The only feature is the abundance of storage butter."

Members of the Elgin produce board have various opinions as to the cause of the rapid decrease in Western butter shipments. One member, in discussing the subject, said he believed the farmers were generally cutting down their number of dairy cows, and the decrease was more than the natural order of things, this season. He believes there are not as many fresh cows being placed in the dairy this fall as has been the custom heretofore. Other members either believing that the sudden change from grass to drier feed was the cause of the decrease, rather than the number of cows in milk.

Another opinion was that the low prices, prevailing during the late summer and up to the present time this fall, was the cause for the decrease in the amount of milk being produced; and believed this would be more pronounced during the winter season, unless much higher prices prevail than for the last month.

At New York receipts are light and the temper of the market for desirable table grades is a trifle firmer. The official quotation for extra fresh creamery is held at 23 cents, and some business is still doing at that figure, but where the quality is strictly fancy buyers have to pay one-fourth cent more. Firsts are ruling quiet, and there is a dull, sluggish trade for all the lower grades, with values quite uncertain. We note rather less pressure to sell fine storage creamery, and in some quarters a little stronger tone has developed; it is doubtful that any stock that would now pass in the classification of extras could be bought below 19 cents, and most holders are not willing to name less than 20 cents; at the latter figure there was a sale on Change this morning of 100 tubs. Where the good score high buyers are sometimes paying 20 cents and even 21 cents. There is still a large stock of all the lower grades, and these are dragging at irregular rates. No further export business and none in sight. Imitation creamery is quiet. Fresh factory held about steady, but the movement is light. Renovated in only moderate demand and late prices barely sustained.

Fancy September cheese is held about steady at 12 cents, but that is the extreme, and some really nice lots are obtainable at shade cheaper. Dealers generally are thought to be looking on light stocks, and a better trade is expected for after the new year fairly opens. Late made shows poor and undesirable quality and continues under neglect, with prices weak and irregular. Skins continue quiet and prices weak on all grades.

Agricultural.

Produce Notes.

The supply of cranberries seems to be rather larger than was expected at one time. New Jersey growers were holding back in hope of higher prices, but of late have been rushing the stock into the market, causing a condition of over supply. Leading Boston dealers place the quotations at about 25 cents per barrel lower than last week. If growers do not further increase the supply for the present, the market will probably right itself, otherwise still lower prices may be expected. Crop estimates for the present year give the figures 550,000 bushels for New England, 450,000 for New Jersey and Long Island, and one hundred thousand for Wisconsin and other Western States. Total about eleven million bushels. Judging by the course of the market, the estimate is pretty nearly correct, and the crop is rather larger than that of last year, the shortage in the Cape Cod yield being more than made up by the large crop in New Jersey.

Pacific coast shippers suffered a loss of nearly six thousand barrels of choice apples which froze during shipment through Canada. Attempt will be made to recover damages from the railroad, because proper care for the service were not provided.

About forty-five thousand barrels of apples remain in cold storage at Syracuse. A part of the Louisiana exhibit at the St. Louis Exhibition will be reproductions of the fruit of this State in wax.

An Oregon cannery has put up six thou-

sand cans of wild rabbit meat, said to be for export.

A Chicago firm quotes best Baldwin apples at \$3, in large lots. The demand is said to be excellent.

Bermuda potatoes are on hand earlier than usual and rather plenty. Prices started high, but have declined considerably. Shipments of dairy produce from Canada for 1903 are estimated at \$26,369,000 or over, and the total is expected to be \$2,000,000 greater than that of last year.

The practical working of the new oleomargarine law does not appear to check the trade in that article so much as was expected. During the year ending June 30 at 47,785,796 pounds, of which about twenty million pounds was classed as uncolored oil, paying tax of only a quarter of a cent per pound.

Grape growers in the Lake Shore district having made an excellent growth this last season, and the ground being filled with water and in good condition for winter. An English authority estimates the world's corn crop for 1903 at 2,830,000,000 bushels, against 3,000,000,000 bushels last year.

Hay in Light Demand.

The hay markets are dull and quiet, with no important price changes in the leading markets of the United States and Canada. The market has a settled appearance, with nothing special to indicate a coming change. The large receipts in some markets are an unfavorable sign.

The average price for the top grades in the leading markets for last week is \$15.79 per ton, a decline of \$5.83, the average price in the same ten markets for the week in July 21-22, August 18-19, September 16-18, October 15-16, November

15-16, showing a steady decline during the six months, and a falling off of \$2.16 per ton in the last half of the period.



Crop of Onions on muck soil which is specially adapted to this crop and to cabbages, peppermint and celery.—Fisher and Rice.

plenty. Hothouse lettuce, and tomatoes cucumbers are higher. Hothouse asparagus brings \$5 to \$6 per dozen bunches.

Grain Tending Upward.

The wheat market includes several puzzling features at present, and experts do not seem to know just what to make of it. The Government crop report last week, this assumes that the spring wheat crop was about 237,000,000 bushels. Many judging from the amount of wheat on sale and in sight.

For both winter and spring wheat the same estimates show a yield of 637,821,855 bushels wheat, against 659,000,000 the estimate in October, and 670,000,000 bushels in 1902. The corn yield is estimated at 2,244,170,925 bushels, a decline of nearly 70,000,000 from the November estimate and on-crop yield.

Although the figures show some reduction from the October estimate, there is hardly enough to explain the present market. The idea seems to be quite prevalent that the crop is really much shorter than as above estimated, and many Western farmers and elevator men are holding back for an expected advance. An outside feature the prospect of a Russo-Japanese war, which some think would cause an increased demand for American wheat and flour. But food supplies enough to carry them through a short war, and the occurrence would probably cause only a small advance in grain prices for the present.

Another interesting consideration is the

AT THE WOOD YARD.
Winter Scene on the Berkshire Boys' Industrial Farm.

condition of the winter wheat crop now in the ground. Dry weather has been the cause of much uneasiness as to the prospect, but recent good rainfall has greatly improved the outlook.

The corn market is firm on the basis of the Government report, which estimated the crop at seventy million bushels less than was expected in November. This is in line with our reports from the central corn belt, which complain of yield and quality both lower than appeared likely before husking. The crop, however, is still a tolerably good one and affords no basis for much advance in price.

Vegetables in Light Supply.

The supply of most lines of vegetables, both Southern and native, is rather light even for the time of year, and the tendency to advance has been evident for some time. Trade at the season is rather light, which partly balances the light supply. Cabbages are still scarce, although top prices of larger receipts at New York and Boston. Best Long Island about \$5 lower.

The potato situation is firm and prices fully maintained. Demand is very quiet as usual at this season, and no further advance is expected until after the first week in the new year. There is certainly no great surplus of potatoes in sight and most dealers take a favorable view of the outlook. The demand for seed potatoes from Southern buyers, and the supply is becoming rather short. Squashes are in light coming from the West where the crop seems to have been larger and of better quality than this year in the East. The onion taken. Southern stuff is still in light supply and hothouse vegetables are not very

prevalent. The movement on poultry is usually the week after Christmas was quite moderate; in fact, after any of the holidays where poultry is generally used, there is seldom any very active demand for large quantities of poultry like what there is during these holiday periods. We always have more or less reaction ordinarily

after such periods, although the market at present is very well maintained, and we some days to come; in fact, we expect about from now at least until after the New Year.

The receipts of poultry from points in New England are quite limited, and anything that is fancy still sells well, and brings good prices. We quote you the following prices: Fowls 13 to 14 cents, fancy sized chickens from 18 to 20 cents, medium roosters 10 to 11 cents, fancy turkeys 30 to 12 to 14 cents, fancy ducks 16 to 17 cents, geese very little change in our market for the than that.

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prehend the situation. Railroads continue to boom the thing, and as a remedy for a sell at home and everything will be lovely, when the one great good they could do is to enable growers to reach the many small cities that never yet saw a carload of Georgia peaches. This would make new markets for two thousand or three thousand carloads, and for the present I will have to leave it to others to look after the other seven or eight thousand that are surely coming in the 'good old some-time.' Personally I am building a little umbrella for I don't expect to make a cent of the wet. To guard against too heavy losses, 'The Elmer' peach Mr. Hale considers less popular than formerly, and he is 'planting other kinds.

Cranberries Dull.

Large stocks of cranberries were left over from the holiday markets, and Boston dealers say they may need to ship them outside the State to find a market. The cranberry season has been rather disappointing, the Cape Cod stock, a large proportion of which is in poor condition. Some dealers are cutting prices considerably to hasten sale. Sales are dull, with the bulk of transactions ranging between \$5 and \$6 per barrel.

Quiet Poultry Trade.

S. L. Burr & Co.: The movement on poultry is usually the week after Christmas was quite moderate; in fact, after any of the holidays where poultry is generally used, there is seldom any very active demand for large quantities of poultry like what there is during these holiday periods. We always have more or less reaction ordinarily

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and the territory below the Great Lakes. The picture of General Wolfe's camp is a realistic one, but the account of the scaling of the heights of Quebec and memorable battle on the plains of Abraham given in detail, will stir the hearts of any one who has red blood in his veins. Then follow the defense of Quebec, the attack and defeat of the French forces, and the gathering of the English army around Montreal, all of which leads up to the fall of that city, and the end of the war and the story.

One could wish that young America might read Parkman's account of the historic events narrated in this book, but if Mr. Stratton's historical stories instill a craving for the pursuit of real history, then his books have done excellent missionary work. There is plenty of adventure and many stirring scenes in the book before us. Dave and Henry are characters whom boys will love, while their old-time frontier friend, Sam Barrington, is one who will endear himself in the hearts of the readers. It is not all war, for fishing, hunting and Indians have their part to play in the active life of the two boy characters, and there is much amusement to lighten the historical setting of the story. The author has familiarized himself with the works of the historians of the period, and he is, therefore, able to impart a great deal of real information in the guise of a story. The book is well illustrated, and it will make a valuable addition to the library of any growing boy. (Boston: Lee & Shepard. Price, \$1.12 net.)

CONQUERING SUCCESS, OR LIFE IN EARNEST.

Thirty years ago William Mathews, the author of the book with the above title, entered the field of letters with a volume entitled "Getting On in the World; or Hints on Success in Life." He is still writing on the same topic, and strange to say there is still a demand for advice of this kind today as there was three decades ago. Indeed, there are today periodicals which make a direct appeal to young men to do their best, and their success alone would indicate that the present younger generation is eager for advice, even though the advice given is not always followed. "Conquering Success" is, in fact, made up of principal extracts from the Saturday Evening Post of Philadelphia, Success World and other periodicals, and there probably is not a young man in this land who with the determination to do his best and his utmost to succeed in life.

The number of examples used by the author in scoring his points is little less than marvelous. He scarcely gives a word of advice without a few cases in point taken from real life. There are more concrete illustrations in this book than the writer ever remembers having seen gathered together in one place. The author is never "Energy." He refers to this quality as Caesar, Frederick the Great, Napoleon, Richelieu, Pitt, Andrew Jackson, and a score of others. His range of subjects, too, there are which go to make up what the author calls success in life: choice of a calling, health, unity of aim, energy, thoroughness of purpose, patience, readiness, self-assurance, etc. Perhaps one of the most up-to-date chapters in the book is "The New changes which have taken place in all kinds of business. And right here he makes a pertinent remark: "The United States have trade to which they are entitled by their proximity, simply because their manufacturers and merchants will not—like those of Europe—give long credits, and in other respects conform to the business methods of the Latin-American peoples." In the system of cramming the memory has given way to mental discipline. Under makes the remark that "hundreds of persons who are supposed to have shortened their lives by overwork of the brain would have died far earlier but for their mental labor." Another secret of success is "All noted men of action have been rising," says our author, and he instances Gibbon, Scott, Dr. Johnson, Webster and Pope Leo XIII. The book is an excellent one to place in the hands of a young man. Mr. Mathews has done his work well. (Boston: Houghton, Mifflin & Co. Price, \$1.50 net.)

THE GIRL ROUGH-RIDERS.

We note in the introduction to this book that the author, Col. Prentiss Ingraham, has received the endorsement of Gen. Nelson A. Miles, Gen. Frank D. Baldwin of the United States Army and Col. W. F. Cody, better known as "Buffalo Bill." Surely a book in which this trio of notable interest themselves must be an unusual one. It is. Capt. Frederick Fenton of the Fifth Arizona Cavalry, stationed at Fort Huachuca, makes an eventful trip through the Grand Canyon of the Colorado River and along the Mormon trail, through Arizona and Utah, in company with a party of school girls, the young friends of his niece, Ivy Fenton, with his daring wife for the chaperone. "The Six Fair Scouts," or "The Girl Rough-Riders," as they are called, appear to be at home on the thousand-mile journey as they were simply going on a Sunday-school excursion, together with teamsters, ambulance driver, broncho tenders and others, making thirty in all. As Colonel Ingraham, the author, made the trip in company with the three gentlemen who endorse the book, the information in regard to the region through which they pass may be regarded as fairly accurate. There are of course no more remarkable natural wonders in America than the Grand Canyon, but it is the sensational adventures which interest the young reader. And excitement Indians, and bears and blizzards, the average reader would occasionally have moments of regret that she was not snugly ensconced in her comfortable corner of her own room at home, but the girls in this book in contact with, and they ride, and hunt City is reached. The tone of the book is wholesome, and there is much information between the covers which the reader is ex- like stories of adventure in the "wild West," this book will make an especial best of the photographic reproductions of the portraits of General Miles and Colonel Cody. Boston: Dana Estes & Co. Price, \$1.00 net.)

Literature.

AT THE FALL OF MONTREAL.

Among the popular present-day writers for the American youth, Edward Stratemeyer occupies a position in the front ranks. He has already won the regard of thousands of boys by his numerous stories, which he apparently turns out at the rate of several a year. "At the Fall of Montreal," which is a complete story in itself, forms the third of the two previous volumes being "With Wolfe and his heroic antagonist, Montreal." It is needless to say that the young reader will follow with avidity the story of the adventures of Dave Morris and his cousin Henry during the last campaign against the French for the possession of Canada.

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HOLSTEIN-FRIESIAN ASSOCIATION OF AMERICA.

President, Henry Stevens, Secretary, F. L. Houghton, Treasurer, F. L. Houghton, N. Y.

FEE FOR REGISTRY.

For members—Male, \$1.00; Female, \$1.00. For non-members—Male, \$2.00; Female, \$2.00. For life members—Male, \$10.00; Female, \$10.00. For foreign members—Male, \$5.00; Female, \$5.00. For all black and white.

Life Membership.

Advanced Register in charge of the Association, who will furnish all information and forms relating to Registration, and to the Association.

Ayrshire Breeders' Association.

President—George H. Yeaton, Secretary—C. M. Whitson, Treasurer—Nicholas S. Winsor, N. Y.

Private Herd Registry.

For members—Male, \$1.00; Female, \$1.00. For non-members—Male, \$2.00; Female, \$2.00. For life members—Male, \$10.00; Female, \$10.00. For foreign members—Male, \$5.00; Female, \$5.00. For all black and white.

American Jersey Cattle Club.

OFFICE—8 W. 17TH ST., NEW YORK. President—Elmer A. Darling.

Blanks for Registry.

For members—Male, \$1.00; Female, \$1.00. For non-members—Male, \$2.00; Female, \$2.00. For life members—Male, \$10.00; Female, \$10.00. For foreign members—Male, \$5.00; Female, \$5.00. For all black and white.

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CHARACTER ON HORSEBACK

Many a peculiar sight one sees on horseback. Did it ever occur to you that a horse in this condition becomes very much overheated. The saddle with its weight rubs the back. Under the bridle and straps are little sores and chafed spots. Soothe and refresh by the use of Gossamerine. Article of great value in a stable.

G. N. CRITTENTON CO.,
115 Fulton St., New York.

POULTRY.

Raising Pure-Bred Poultry.

Hazelmere Poultry Yards are the property of W. B. Richardson and are situated in Knightsville, about four miles from Providence, R. I. They cover three acres. The houses are on the cratching-shed plan, and consist of eight breeding and laying houses, fifty feet long, a small fitting house for exhibition birds 20x18 feet, a feed house and a room 50x24 feet. The house also contains a large number of pens for the birds that are being prepared for the winter shows.

The yards are 100x25 feet and are shaded by peach and plum trees. The trees are now five years old and in full bearing. No chicks are raised on the home place, but Mr. Richardson is interested in several farms, where the chicks are raised and brought home in the fall. After giving nearly all breeds a good trial for the past five years, Mr. Richardson has come to the conclusion that the Rhode Island Red and Columbian Wyandottes are the best, both for eggs and market poultry. That his Reds are as good as can be produced has been shown in the past few years, as they have been big winners in both the Boston and New York shows. Mr. Richardson is the largest breeder and exporter in this country of Columbian Wyandottes.

Here is a breed that without doubt have a great future before them. In all that goes to make up a valuable breed they are far ahead of both the Silver-Pencilled and Partridge varieties. The writer has handled and mated them at Hazelmere since Mr. Richardson first bred them, and tested, side by side with these two varieties, have shown that they lay larger eggs, the eggs are better color and more uniform in size. The chicks grow faster and are harder. They are a better market fowl and dress as good as a White Wyandotte. Breeds may come and breeds may go, but the breed that pays is the one that has utility for its foundation, and the Columbian is the best utility breed of all the new Wyandottes.

Auburn, R. I.

A. C. ALLEN.

Hints for Marketing Poultry.

In selecting a shipment of poultry for the market the farmer will find it to be of advantage to have his birds of uniform size. They look better and neater, and will bring a higher price. If the birds are tied together in pairs by the necks, always select two that look as much alike as possible. Pack them all neatly, for appearance has much to do with finding a market for them. Handle the carcass so carefully that the light outer skin will not be broken. The skin under skin showing through in spots detracts from their appearance. There is one thing which farmers generally overlook, and that is the saving of feathers, especially those of the turkey. At

pre-ent, first-grade feathers will bring the following prices: Turkey tail feathers, thirty-six cents per pound; wing feathers, twenty-five cents per pound; body feathers, dry pick d, 5 cents per pound; goose and duck feathers, from twenty-five to forty-five cents per pound, according to quality. While it might not pay to save feathers from a few fowls, it would undoubtedly pay well where a large number are dressed out, and thus the fowls would contribute their last item to the poultry fund, which is becoming such an important factor on the farm.—P. H. Sprague.

Care of Laying Hens.

Laying hens should be kept in well-lighted, clean, well-ventilated quarters, with large windows to the south to admit plenty of sunlight. Each hen should have ten square feet of space for run and scratching. The house should be six feet high at the lowest point. Place dropping boards under the roosting perches which should occupy only about one-third the space of the house. This arrangement will allow the entire floor for run and distribution of litter. The floor should be kept dry; clean straw, chaff or leaves to the depth of two or three inches should be thrown on the floor. A dust bath three feet square, filled with common road dust, should be placed in one corner.

Not more than twenty-five hens should be kept in one enclosure. Exercise should be encouraged. This can be done by feeding sparingly in the morning. For the morning feed boil a pint of oats, drain off the water, add all the bran that will adhere to it, feed in a clean trough. At ten-thirty to every twenty-five hens throw three pints of equal parts, corn, oats and wheat in the litter which will compel them to exercise to get it. For the evening feed give them all they will eat of a mixture of green vegetables, chopped roots, boiled potatoes, cut clover with bran shorts or pea meal; add enough water to make thick and crumbly but never soft and sloppy. To this add twice a week some cut bone and meat scraps. Provide hens with sharp grit and oyster shell or some other form of lime. Be careful not to overfeed. Hens who liberally fed become fat and lazy, don't exercise and consequently will not lay. Provide fresh water.—Hess & Clark, Ashland, O.

Valuable Poultry Experiments.

Bulletin 83 of the West Virginia Experiment Station contains a full account of four experiments with various methods of feeding and sheltering poultry and their influence on egg production, from which the following summaries of the results are condensed:

The first experiment was to determine the relative value in egg production of three kinds of food, namely, beef scraps, ground fresh meat and bones, and milk albumen. The beef scraps were obtained from a large packing-house in Chicago; and the results were by far the most favorable with these, the ground fresh meat and bones coming next in order. The eggs from each of the three pens were incubated and found to be equally fertile. An additional advantage in the case of the beef scraps is that an indefinite supply can be obtained at one time and will not spoil.

In the second experiment five different pens of fowls were employed for two periods of sixty days each, and an effort was made to determine the following points: Whether it is better to feed whole grain, or whole grain at night with mash in the morning, or whole grain in the morning with mash at night. No difference could be observed between feeding the mash in the morning and at night, but all experiments, including mash, had better results than those with whole grain. In general, the heavier the breed of hens and the more closely they are confined, the better they do with the whole grain ration. Beef scraps were and should be fed with both rations.



ESTABLISHMENT FOR PURE-BRED POULTRY.

Hazelmere Poultry Yards.

See descriptive article.

The next experiment was to determine the advantage, if any, of keeping hens warm on cold nights by means of curtains surrounding their perches. The results of all the tests were unfavorable to the use of curtains in the climate of West Virginia. It should be noted, however, that curtains were used at the Maine Experiment Station with highly satisfactory results, so that the method may be a good one in very cold climates.

The last experiment was a trial of the Van Dresser method of producing an early and uniform moult. The advantages of the early moult are that the feathers may grow again and the fowls get in good condition to lay well before cold weather sets in. The Van Dresser method of attaining this consists in withholding food for several days until the production of eggs ceases and the fowls begin to fall off in weight and then feeding heavily with a ration specially adapted to building up the system and forming feathers. Beginning Aug. 5, 1909, the experiment was tried with two lots, each of two different breeds. One lot of each breed was left to shift for itself, and the other was fed its regular daily ration. This experiment was continued thirteen days. The hens not fed had stopped laying by the seventh day and had practically all begun to moult by the thirteenth. Then all the hens were fed the same ration again, with the highly gratifying result that those whose food had been omitted all had new feathers and had begun to lay again by the time the others began to moult. Those made to moult in August entered the winter in much better condition and were more profitable.

Later experiments and experience with hatching machines emphasize the desirability of restricted ventilation or the supplying of abundant moisture in the air of the egg chamber during the first week of incubation. Either or both of these precautions tend to aid normal rational development of the embryos during the early stages.

Horticultural.

Forcing Strawberries for Early Market.

A compost of thoroughly rotted sods and the cleanings of the cow stable, in proportion of three parts sod-mould to one of manure, is first prepared. Decayed leaves and muck or any good rich loam can be used in place of sods. With this compost make fine and clean by passing it through a coarse sieve, fill in June or July as many three-inch pots as are desired and sink them to their runs along the sides of the rows from which the winter-bearing plants are to be obtained.

From the parent row guide the first runners so that they will take root in the pots, select each runner form but a single strong plant. In about two weeks these plants with the accompanying earth are ready to put into eight-inch diameter pots



WINTER STRAWBERRIES.

filled with compost. Broken pottery can be placed in the bottom of these pots for drainage. One plant is placed in each pot and the soil pressed firmly about the roots. Place the pots in a shady place for a few days till the roots have taken hold of the new soil, then change to an open, airy position, close together, where they can be cared for daily. The plants must be kept moist and made to do their best until October. After this, water sparingly and air to ripen foliage and roots and induce a season of rest.

In November fill a hotbed pit with dry leaves, sink the pots in there close together up to their rims, later cover the tops to prevent the earth freezing. Cover the pit with boards to keep out the wet, but not tight enough to exclude the air, keep them barely moist, enough to prevent shriveling. Best varieties for forcing are those of a low, stocky growth, bearing perfect flowers and sweet, highly-flavored fruit as Triumph de Grand, La Constante, bush Alpines and Black Defiance.

It requires from ten to fourteen weeks to mature the fruit under glass. To ripen berries for the holidays, subject some of the plants to heat in October. They can be taken from storage every two or three weeks, so as to secure a succession, and if a mishap befalls one lot of plants, there are other chances for winter fruit.

In forcing the plants, follow nature. In the spring, plants gradually awaken into life and blossom when the weather is comparatively cool. Let conditions under glass accord as near as possible with those under

the open sky. If heat is turned on too rapidly the plants will look well and blossom, but the stems will be without pollen and the pistils turn dry and black. At first the temperature is 45° to 50°. Admit air freely at all times; less will answer in cold weather.

If plants grow spindling, give more air and less heat. An average of fifty-five to seventy degrees by day to forty-five to fifty degrees by night is correct. Roots require coolness and evenly maintained moisture, while the foliage needs air and light; therefore the pots should be on shelves close to the glass, and, if possible, shade the pots while the plant is in full light.

When the buds begin to open, the forcing must be conducted slowly and evenly. After the fruit is set, heat can be increased till it occasionally reaches 75° at noon. Give less water after the fruit begins to color; it will make the berries sweeter and ripen faster. Keep off all runners and fumigate with tobacco if insects trouble.

On the same principles the ripening of strawberries can be hastened by the use of hotbeds, cold frames, ordinary sash. Considerable fruit may be ripened by digging up clumps of plants during a mild spell in winter, setting them in boxes or pits of rich earth and placing in the greenhouse. Connecticut. I. A. LEONARD.

Foreign Apple Markets.

All foreign apple markets continue to show improvement, and with light arrivals from America and Canada, prices are tending upwards. Arrivals of finest red apples are selling at prices as quoted by C. A. Cochran that give nets all the way from \$2 to \$2.25 here in Boston, some extra quality realizing a trifle more. Golden and Roxbury Russets are in good demand. Foreign apple markets have recovered from the serious slump and demoralization of some three weeks ago. The heavy falling off of shipments from this side the past three weeks enabled them to clear up the markets in good shape, and cablegrams come daily, announcing improved conditions and prices advancing. Anything going forward now will be likely to arrive out on good markets and meet satisfactory prices.

The total apple shipments to European ports for the week ending Dec. 26, 1903, were 38,998 barrels, including 11,523 barrels from Boston, 4546 barrels from New York, 19,748 barrels from Portland, 1037 barrels from Halifax and 2144 barrels from St. John, N. B. The total shipments included 27,994 barrels to Liverpool, 1749 barrels to London, 622 barrels to Glasgow and 3233 barrels to various ports. The shipments for the same week last year were 40,296 barrels. The total shipments since the opening of the season have been 2,479,171 barrels, against 1,700,317 barrels for the same time last year. The total shipments this season include 440,916 barrels from Boston, 842,834 barrels from New York, 153,660 barrels from Portland, 728,132 barrels from Montreal, 271,711 barrels from Halifax, 27,260 barrels from St. John and 14,658 barrels from Annapolis.

The Saunterer.

The Boston barge had been ridiculed often by visitors to our city from New York and elsewhere, but its capacity for storing away many small parcels and articles will make it popular here always. Sometimes it gets filled to overflowing, as was the case in an "L" car the other day. On this occasion it was carried by a young girl of seventeen or eighteen summers, one of a group of pretty maidens who were somewhat self-conscious, and imagined that all the passengers had their eyes fixed upon their budding beauty. Suddenly the car gave a lurch, the girls were standing up, and an orange rolled out of the Boston barge, which one of them carried, and went speeding along the whole length of the vehicle. Several gallant young men rushed after it, and after tumbling over each other several times, one of the would-be capturers secured it. With a gratified smile he passed up the aisle, attracting universal attention, and he it out to the "air," fairly Lillian to whom it belonged. Did she accept it with thanks? Not at all. She actually refused to receive the fruit, and the young man was obliged to pocket the insult with the Florida product. His perilous quest came, therefore, to naught, for the damsel did not even smile upon him. In point of fact, she gave him the cold shoulder by turning her back so that he could not see her ungrateful face.

A benevolent lady of my acquaintance, who is afflicted with deafness, called at the house next door to her own to inquire about a sick neighbor yesterday. A green servant girl answered her bell summons, and the caller said: "How is Mrs. Stone this morning?" Then she put her ear trumpet in place to hear the response. What was her surprise to see the intelligent domestic seize it and rush up stairs in the direction of the sick room. She followed after and found the invalid laughing heartily, while the girl said: "Shure, didn't ye tell me to bring ye any thing that was left for ye?"

The owner of the ear trumpet of course recovered it, and now she is wondering if the girl thought it was a curlew or something good to eat.

Great January Clearance Sale

Of Bright New Attractive Merchandise
At a Saving of from 25 to 50 Per Cent.

THROUGHOUT our entire establishment, in every department, such goods as Muslin Underwear, Petticoats, Dressing Sacques, Corsets, Shirt Waists, Cloaks, Suits, Dress Goods, Silks, Millinery, Etc., have been marked From 25 to 50 Per Cent. Less Than Usual Prices.

GILCHRIST COMPANY,

The BOSTON'S FASTEST GROWING DEPARTMENT STORE, The Daylight Store.
Washington St., Through to Winter St.
The Daylight Store.

work who had an ambition to own a watch.

Her employers endeavored to discourage her in this aspiration, but finally the master of the house consented to buy her a time-piece, and he brought it home in a neat case, the whole affair costing about enough to absorb five weeks pay of the servant. It was a stem-winder, and the new owner could not for some time acquire the art of keeping the watch going, so it laid on her mistress' bureau for some weeks, in order that it could be made to keep time regularly. At last, however, the proud and rightful possessor of it learned how to manipulate it successfully, and five or six times a day, when there was a lull in household duties, she would exclaim:

"I must go upstairs now and wind me watch."

The children derived great amusement from this, but they were more thoroughly entertained when a friend called upon their domestic and said:

"What time is it by your gold watch and chain, Mary Ann?"

Of course Mrs. Malaprop is never dead, even with the general spread of education and the multiplication of dictionaries, and I was not surprised at a reception the other night to hear a woman say, when a defeated candidate was pointed out to her:

"It's too bad; he certainly has a very extinguished appearance."

The successful planter owes his success mainly to sowing good, fresh seed. He knows the value of buying the home-grown product direct from the reliable grower.

The well-known seedman, James J. H. Gregory & Son of Marblehead, Mass., have for nearly half a century sustained the reputation among planters, farmers and gardeners throughout the country of producing and selling only fresh, pure and reliable seed; a reputation founded not merely upon growth, selection and care of the seed stock, but also on the purity and thorough reliability of the seed raised from it. These famous seeds are sold under three guarantees, which prove the sincerity of the growers while they insure safety to the planter.

Messrs. Gregory & Son are sending out their annual catalogue for 1904, which contains many new improved varieties in vegetables, small fruits and flowers, and a vast number of farm to garden plants, which should be of great utility to every one who plants seed. This valuable book will be sent free for the asking.

1870 and \$435,000,000 in 1880. The per capita money in circulation in 1903 is \$30.21, against \$26.34 in 1900, \$19.41 in 1880 and \$13.85 in 1860. Deposits in savings banks in 1903 are \$2,935,000,000, against \$1,524,000,000 in 1880, \$550,000,000 in 1870 and \$149,000,000 in 1860. The value of manufactures for the census year 1900 is given at \$13,000,000,000, against \$1,300,000,000 in 1880, and less than \$2,000,000,000 in 1860. Railways in operation in 1902 are 203,132 miles, against 166,703 miles in 1880, 83,262 miles in 1860, 92,222 miles in 1870, 20,325 miles in 1850 and 3621 miles in 1850.

The first inaugural meeting of the Massachusetts Horticultural Society under the new by-laws will be held Saturday noon, Jan. 2, at Horticultural Hall, Boston. As it is the commencement of the term of office of the new administration, an inaugural address will be delivered by the president-elect, Henry P. Walcott, M. D.

The most notable increase in exports of the United States for the eleven months ending with November was in agricultural products, which amounted to \$114,172,255 in November this year, against \$83,005,550 last year. This accounted for altogether by the enormous increase in the exportations of cotton this year over last, the value of the cotton exported during November this year being \$27,991,284, against \$25,343,812 last year.

The Cuban reciprocity treaty went into effect at twelve-five o'clock Monday, and customs officials are now making collections in accordance with it. It is expected that the imports of tobacco and sugar will show a considerable increase.

About Good Seeds.

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GRAVES' MANGE CURE

For Dogs, Cats, Horses, Cattle and Sheep. All Skin Diseases they are subject to can be cured by this valuable remedy. Also

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For Fleas and Lice for Dogs, Cats and Horses. Sure to kill them quick.

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THE ANGORA CAT.

A Superb Edition, Beautifully Illustrated, Telling How to Select, Breed, Train and Manage Them.

Only book of its kind. Contains most important chapters on The Origin, How to Train, Pleading and Breeding, Proper Food, Breeding and Rearing, Exhibition and Transportation, Washing and Grooming, Diseases, The Correct Type, Differences of Color, and interesting stories of how they eat, drink and sleep; in fact, everything about them. Over thirty-five full-page illustrations from life. "No Cat Form," "A Cat Letter," "Bats," "A Forgotten Prisoner," "Her Wives Supplied," "Attention to Cats," "The Homeless Cat," "A Cat Story," "The Sassy Cat," "A Hospital Cat," are all interesting tales. The volume, aside from being an excellent treatise on the cat, forms a delightful gift book. Edited by Robert Kent James.

No author could be more justified in speaking on his selected topic, as one having authority, than is Mr. James in appearing as an expert on the Angora, for thousands of beautiful specimens of these lovely creatures owe not only their existence, but their excellence, to the skill, care and knowledge of this well-known breeder. The book contains much useful information as to the diet and general care, it being, in fact, a work that is indispensable to any owner of one of the valuable and beautiful animals.—New York Voice.

It comes from a practical breeder. Prospective breeders of Angoras will find this book interesting reading.—Country Gentleman.

Those who are lovers of cats will find much that is interesting and instructive in this book.—School Education, Minneapolis.

It seems to us a book which those who are fond of cats will be glad to read.—George T. Angell, in Our Month, Boston.

It is a useful volume, both for the owners of the Angora and other cats. It is well bound and fully illustrated.—Our Fellow Creatures, Chicago.

A volume of highest authority, exceedingly entertaining, full of facts, beautifully illustrated.—American Cultivator, Boston, Mass.

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HOW TO MAKE \$500 A YEAR KEEPING POULTRY.

A 48-Page Illustrated Book, Telling How to Do It, and All About Profitable Poultry Raising.

Containing Chapters on How to Make \$500 a Year Keeping Poultry; Poultry Yards and Houses; Choice of Breeds; Care of Poultry; Setting the Hen and Incubation; Hatching and Care of Chicks; Fattening and Preparing Poultry for Market; Diseases of Poultry; Ducks, Geese and Turkeys; Caponizing; Receipts and Incubators; Use of Green Bones for Poultry, etc.

Sent to any address on receipt of twenty-five cents. Stamps taken. Mention the PLOUGHMAN.

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Let of beautiful Angora Kittens in exquisite colors charming dispositions and every style. Send 10 cts. for pictures illustrating.

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THE LAKE SHORE AND MICHIGAN SOUTHERN RAILWAY COMPANY.

Issue of \$40,000,000 Twenty-Five Year Four Per Cent. Gold Bonds.

Principal payable Sept. 1, 1928. Interest March 1st and Sept. 1st. Both payable in gold coin of the United States of the present standard of weight and fineness, and without deduction, from either principal or interest, of any tax or taxes which said Company may be lawfully required to pay or retain therefrom by any present or future laws of the United States or any of the States thereof.

Coupon bonds of \$1000 and \$500 each, bearing interest from September 1, 1903, exchangeable for registered bonds without coupons. Registered bonds may be converted into coupon bonds at the option of the owner.

New York, December 24, 1903.

The undersigned offer, subject to sale, \$40,000,000 of the above-described bonds at 90 and accrued interest. The subscription list will be opened on January 2, 1904. Preference to purchase will be given to the holders of the 5 per cent. notes of the Lake Shore and Michigan Southern Railway Company which mature on January 12, 1904. To such holders desiring to purchase a rebate of one-half per cent. will be made, interest on the two securities being adjusted.

For particulars as to the property and security, reference is invited to the letter of Mr. W. H. Newman, President of the Railway Company. Copies of this letter, the indenture and any further information that may be desired may be obtained on application.

We recommend these bonds as an investment of undoubted character.

For New England,

KIDDER, PEABODY & CO.,

Boston.

J. P. MORGAN & CO.,

NATIONAL CITY BANK OF NEW YORK.

By JAMES STILLMAN, President.

FIRST NATIONAL BANK OF NEW YORK.

By GEORGE F. BAKER, President.

New York, December 31, 1903.

In view of the transactions, of which we have already been notified, the privilege accorded to the holders of the Lake Shore and Michigan Southern Railway Company 5 per cent. notes above mentioned, of receiving a rebate of one-half per cent. upon purchases of the new twenty-five year 4 per cent. Gold Bonds, will be withdrawn after 3 o'clock P. M., January 4, 1904.

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KIDDER, PEABODY & CO.,

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MASSACHUSETTS PLOUGHMAN

TELEPHONE NO. 3767 MAIN.

Frozen pipes are now ripe and the plumber joke is in season.

The old year reserved its most terrible calamity for the last.

It's the well-to-do stranger that doesn't get taken in at police headquarters, nowadays.

The police of Paris seem to have taken the baker's strike right out of the oven before it was half cooked.

It does seem, in literary Boston, as if this St. Louis party that is being prepared our famous contemporary might have included five authors.

After all there are a good many persons who have only just realized that anybody could possibly question the pedigree of the Protestant Bible.

The gypsy moth had better look out or get out over in Medford. All the indications are that before long he is going to have a run time.

The selectmen of Brookline would apparently eliminate any undue flying over the snow from the old song; at least, the flying must be strictly non-competitive.

No one need worry seriously over the King of Denmark's chill. Many of us had chills ourselves early in the week, and Denmark is known to be a chilly country.

We agree with Gen. H. V. Boynton. If people will write history by all means make them write it as accurately as possible. There are doubts enough even in the most careful histories.

The Connecticut gentleman who was too gentlemanly to sleep in a cell was not too gentlemanly to take advantage of the kindness of his police guardians by escaping from more gentlemanly quarters.

The only immediate solution of the motive that impelled some unknown person to throw a bucket through a local shop window the other evening is that he must have imagined it to be a bucket shop.

Out in Indiana stripes for convicts are being abandoned from penal regulations and here in the East some of our own justices are advocating a return to the whipping post. That about even things up.

Much interest has been excited concerning the two young women of Winthrop who took a dip in the ocean last Sunday morning. But who knows whether the pipe that ordinarily supplies their morning tub may not have been temporarily out of commission.

The Pennsylvania contractor who has just seized the plant of the University of Southern Pennsylvania because he hasn't been paid for erecting the building needs only a few professors to be able to give his sons a college education without sending them away from the home influence.

Chicago, well, doubtless, be more careful in future as regards naming her school-houses; and yet it would seem as if a citizen who knew that the little schoolhouse just round the corner was named in his honor would think of all the trusting little ones, learning their first lessons within, and have an anchor out to windward of his own honesty.

Thirty Hawkins street is a good number to remember, especially in view of the recent statement of the chairman of the Poor Board that the miscellaneous giving of times to beggars is responsible in part for our present reign of lawlessness. It is at 30 Hawkins that the city provides these same solicitors for charity an opportunity to eat and sleep after earning the privilege.

The farm woodlot is not the bonanza now that it was during the coal strike, but firewood is still in good demand in most localities at prices somewhat above those prevailing a few years ago. The coal magnates show an inclination to steadily advance the price of coal. Such action cannot fail to improve the market for wood. Probably the cord wood trade, as well as the lumber trade, has already seen its lowest values, and will tend to improve in the average of a series of years in the future. Farms with a large growth of wood and timber are often very desirable property at prevailing prices.

The sentiment against immoral features at agricultural fairs grows stronger every year. There is a decided reaction following the wave of laxity which has swept over the country since the time of the "midway" at the Columbian show and elsewhere. Significant is the declaration of the secretary of the Kansas State fair, "We will not have a carnival, but a clean, wholesome, genuine State fair. No liquors or gambling will be allowed, no midway and no side show of any sort that will bring the blush to any one." The Western shows were at one time the worst offenders, but public opinion and the good sense of the management have brought about a change. There is still room for improvement in most sections of the country.

The pure food law, unlike most new enactments, seems to be working better and more thoroughly than was expected. Its energetic application by the Department of Agriculture is bringing to light all sorts of fraudulent and adulterated products which foreign shippers have been trying to dump upon the American market. Some of the discoveries are rather comical. The other day, with a whoop and a flourish, Dr. Wiley's men swooped upon an invoice of "Norwegian meat balls" which appeared to be some mysterious hash-like mixture of an objectionable nature. Other imports are downright swindles because of wrong labels or misleading labels. Prompt action against dishonest foodstuffs helps to maintain the market for honest food products.

The peat bogs may some time prove a new source of marketable fuel. Similar material is already in common use in Europe and is made by a rather elaborate process from the deposits of the bogs in Holland, Germany and Russia. There are hundreds of millions of tons of the raw material in eastern Massachusetts alone and a practically unlimited supply in various other localities. Something is already being done in the manufacture of salable fuel from these

sources, but it is a question whether the business has reached a stage where the peat fuel can in any way compete with coal. Some time the peat bogs may do wonders to revive the manufacturing industries of the North Atlantic States, and likewise prove quite valuable parts of the farm on which they are located.

The progress of new ideas in forestry is shown by the efforts here and there to make the most of the farm woodland. Thus one farmer is going over his swamp lot, cutting out the birches, which would otherwise soon decay and be a total loss before the rest of the growth is ready to cut. The remaining trees are mostly swamp maples and will occupy all the space and produce as much wood as if the birches had not been there. Another farmer went through his pine lot, cutting off the lower branches to prevent the long knots, which otherwise result from the stumps of dead lower branches. Another farmer is having his woodlot cut with special care to leave the likely young trees, which will grow and occupy the whole space much sooner than if nothing but sprouts and small undergrowth were left. These are practical measures and a part of good, modern husbandry.

Massachusetts and the Blind.

A very interesting meeting was held at Perkins Hall on Tuesday evening last by the members and friends of the Massachusetts Association for Promoting the Interests of the Adult Blind. Though a great deal has been said and written lately of the crying need that exists in this State for a properly endowed institution in which those who have become blind since childhood may be educated for self-support, more talks and more writings are by no means superfluous. Last year a commission was appointed by the State to investigate the agencies employed elsewhere for helping the blind to help themselves, and a few weeks ago the annual hearing was given at the State House to this question.

But the great public, the mass of the people, have not yet been roused to action in this important matter, and some of these it is sincerely to be hoped the Perkins Hall meeting will reach. Addresses were made by Rev. Edward Cummings, president of the association, Mr. Samuel B. Capen, Rev. F. M. J. Doody, Miss Helen Keller, Mr. Edwin D. Mead and others. A musical programme, arranged by Mr. Wilhelm Heinrich, included songs by Miss Gladys Perkins Fogg, and solos by Mr. Frank O'Brien, the pianist, both of whom are musicians of more than ordinary ability, and blind. We bespeak the presence at this meeting of all PLOUGHMAN readers. The work for which it stands is emphatically one of "social progress."

England has the greatest institution in the world for the blind, and it was founded and is conducted by Dr. Campbell, an American. Dr. Campbell himself begged the million and a half dollars necessary to his undertaking, and he is alive today to enjoy at seventy-three the results of his noble achievement. His son is now in this country doing much to promote the interests of the blind. The elder Dr. Campbell is himself sightless. Many thoughtful people feel that work for the blind will never be what it might be here until a carefully trained sightless person is at the head of a well-endowed institution to teach sightless of all ages methods of self-support. Such a person would understand from experience the great need of having a universal system of raised letters, of using in all publications, and teaching to all students the Braille, which is employed alike in the French, German, Swedish and many other languages. Such a person would be able, too, to stand strongly for the multiplication of libraries for the blind.

It is a shame and a disgrace that in only two or three libraries hereabouts has any adequate provision been made for the needs of the many blind among us. All these questions will, however, be broadly and intelligently discussed at Tuesday's meeting. May the attendance be so large as to put renewed courage into the hearts of those members of the Women's Educational and Industrial Union who are working so generously and unselfishly for this greatly needed measure.

The Bible in the New Year.

Dr. Daniel C. Gilman, ex-president of Johns Hopkins University, has recently written some pages of great interest on the Bible as literature. He urges that we close our eyes for a moment to the sacred character of the Scriptures and consider them merely as we consider the other great writings of antiquity—Homer, Virgil, Cicero and the rest. All the arguments that uphold the value of instruction in these great works apply equally to the Bible.

There are passages in the Old and New Testaments admirably appropriate to be studied and committed to memory by the youngest and the oldest of us. These extracts are lofty in sentiment, dignified in expression, and hallowed by associations. "That man has a serious lack in his intellectual equipment," writes Dr. Gilman, "who is without a knowledge of the Mosiac poem of creation, the origin of the deca-logue, the Exodus, such psalms as the Nineteenth, the Twenty-third and the One Hundred and Third, parts of the Book of Proverbs, the nobler passages in Isaiah, the Book of Ruth, the speeches of Paul, the 'Charity Chapter' in the First Epistle to the Corinthians, and some of the splendid imagery of the Book of Revelation. Allusion to such passages as these abound in English literature; it cannot be appreciated without a study of the Bible. Our history, biography, oratory, poetry, essays, contain innumerable references to incidents, characters, precepts and phrases, which can only be understood by those who are familiar with the pages of the Scriptures."

If for no other reason, then, the Bible should be studied as one of the most inspiring, suggestive, instructive and enduring literatures that the world possesses. That there is a strong historical reason for Bible study must likewise be admitted. But the third argument used, the rhetorical one, seems to us far and away the strongest, considering the Bible, of course, as has been said, apart from its religious value. The present Authorized Version sets forth the English language in its full dignity; for diction alone, if for no other reason, the important passages already named should be familiar to every one. Many of the best writers of recent years freely acknowledge their indebtedness in the matter of style, to the examples and illustrations with which they became familiar in the sacred pages. Such a help we cannot afford to ignore.

In a recent educational conference at New York, President Remsen lamented that for years past his work at Johns Hopkins has brought him into a contact with many college graduates there pursuing scholarly careers who were "actually deficient in everything that pertained to the use of their mother tongue." Evidently this

gentleman would be heartily in accord with the sentiment that our young people sadly need intimate acquaintance with the sterling English of the Scriptures.

This matter is by no means foreign, however, to the concern of those of us who have left school and college far behind. At this beginning of the New Year, might we not, any one of us, do well to acquire the habit of familiarizing ourselves by daily study with the noblest parts of the Bible. In the old days people set to work every year to "read the Bible through." To have read the Bible through once in the course of a lifetime appears to us an achievement worth while just as it is good to have read all of Shakespeare and all of the Waverley novels. But afterwards the choice passages are of most interest and value, and such choice passages of the Bible as outlined by Dr. Gilman we might any of us make our own during the year 1904 by a little perseverance. That the game would be worth the candle there is scarcely a doubt.

A Domestic's Criticism.

The servant girls' side of the question of domestic service is not often heard from, though the complaints of the mistresses are frequently ventilated in the public prints, but a servant girl in the Kansas City Times gives her opinion concerning the frequent coming and going of girls in every household in an emphatic manner. She lays the whole blame for this state of things on the average mistress. Now, there are good and bad mistresses as well as good and bad servants, and we do not intend to take sides in this controversy, but, perhaps, it would be well for householders generally to understand the feeling in life below stairs, in order that they may meet pleasantly any reasonable objections that may be made to their criticisms upon the work performed by their domestics.

This living-out girl of Kansas, which long ago ceased to be considered a part of the "wild and woolly West," says that bachelors and widowers who keep house experience no trouble about getting and keeping good servants because they are not constantly finding fault in an unreasonable manner. In regard to single men she says: "A bachelor can be just as particular as anybody, and he usually is if he keeps house. I don't believe the man I work for would let a slovenly or incompetent girl stay for a week. He wants things right and he knows when they are right, too." She asserts still further that he isn't worrying her all the time, and that he only objects when she is actually going wrong. Perhaps, though, he has no such a keen sight for seeing small things as a woman, and has not an eye for the little niceties which are, so to speak, the breath of her nostrils. A woman can nose out many things that would escape the attention of a masculine head of a house who had no feminine companion, and perhaps the corresponding domestic of the Times stays in her situation because she is queen of all she surveys among the pots and pans and other appointments of her bachelor master's menage.

But let her be heard further on the subject, since her sisters seldom have a defender in print. This wielder of the pen, as well as of the feather duster, continues as follows: "In the place where I am now where I have all the responsibility, I can take some pride in my work. I like to see how spick and span I can keep the house and how low I can keep the grocery bill and still get a good table. In the place where I worked before I didn't care much. Now I think if the Kansas City housewives will inquire they will find, as I have said, that the men who are keeping house don't have any difficulty about having their help leaving, and if the women would treat their servants in the same way, they wouldn't have trouble either, and the household work would be better done." All this seems to us to indicate that if the mistresses will abdicate and allow the domestics to run the households everything will be serene. But this is a kind of Gilbert and Sullivan transformation that will never take place, if we are any judge of human nature. It might do some good, but it won't work in real life. The Kansas maid didn't care much when she worked for women, apparently, because she couldn't have her own way. And the bachelor master has her praise, for the reason he does not interfere as long as his comfort is looked after. When he takes a wife, it may be different. He may expect her to be a kind of upper servant, and perhaps speak slightly of her biscuits, and praise the bread that Mary Ann used to make. After being apparently coddled by the superior Kansas domestic, he may be hard to please and find it difficult to realize that unselfishness is one of the pillars of the home.

New England Leaven.

At the elaborate dinner given by the New England Society, at the Waldorf-Astoria, in New York, in celebration of the two hundred and eighty-third anniversary of the landing of the Pilgrims, president E. C. Stedman, in beginning his address, enlarged the ladies in the galleries as being set apart from the banqueters as if they were Emperesses of China or Llamas of Tibet. This might have been a sly allusion to the custom of allowing the elegantly dressed women to come in at the end of a feast, to enjoy the speechmaking after a dinner, in which the baked beans and the Indian pudding were conspicuous by their absence. Be this as it may, he paid a deserved tribute to the mothers and daughters present, whom the descendants of the Puritans were glad to protect and honor, after the example of their forefathers, though the large Colonial families had disappeared, and he said, in this connection, that it might be trying nowadays to provide for ten daughters and one son, as did the great Jonathan Edwards.

Mr. Stedman significantly added, however, that there were probably fathers and mothers present in the hall who realized that at the present time in New York one lively recipient of pin-money would distribute more money for fripperies and furnishings than would have clothed all these daughters of the old time, and sent their only brother to Yale in addition. But other times, other manners, and perhaps the girls of the present day do not get more enjoyment out of life than did the Edwards ladies before they got married, and "stayed married." Happiness is only comparative, after all, and with good health and youth, and no social heart burnings, the Puritan maidens derived as much pleasure from existence as do their fashionable successors who have to dress three or four times a day, and find the wearing of the same frock frequently during a season a weariness and vexation of spirit. The Misses Edwards were plainly clad, and, no doubt, made their own clothing, but even with their scanty wardrobes we believe they never said they had nothing to wear, like Flora McFlimney, who once lived in Madison square, but who abides there no longer, having gone farther

up town to a more favorable locality.

In regard to the story that no ship by the name of the Mayflower bore the Pilgrims to America, Mr. Stedman quoted Governor Bradford's own words, in which he referred to Ye Mayflower in a land grant made at Plymouth within three years after the arrival of the Pilgrim Fathers. This, he said, set at rest the doubts the society of Mayflower descendants, or "condescendants," that deemed itself the upper house of the New England society.

The attempt to deprive Plymouth Rock of the honor of first kissing the feet of the Pilgrims, he treated humorously by stating that a learned connoisseur had actually asked permission to read a paper before the New England Society, showing that the first Pilgrim landing was made on the borders of a creek, but that he had been officially warned that Plymouth Rock would continue to be the corner-stone of the New England Society in New York, because it had long been the symbol of heroism and devotion to an enduring principle of right. The sinking of Boston at the rate of an eighth of an inch a year engaged the speaker's attention for a moment, and he quoted the Tribune poet, who said:

"When Boston sinks into the sea
To sever New England,
When culture lives with man no more
And Beacon Hill's a mile from shore,
The sacred codfish down below
Will tell us all we ought to know."

Mr. Stedman concluded with the assertion that New England is all right, and that the leaven of the forefathers, in spite of modern innovations, will continue to leaven the whole lump.

Farm Values.

Farming land in the West has risen in value greatly during the past few years. A little of the same tendency has been noticed in many parts of the East. A more decided rise in Eastern farm values has been prevented by the more cautious tendency of Eastern buyers, and by the fact that farm property has long been overshadowed by other forms of investment.

The fact is that many good Eastern farms are relatively much cheaper than Western farms. A given amount of money will today, in favored sections of New England and the Middle States, buy land that will produce a greater annual value than an equal sum placed in agricultural holdings in the prairie States. Eastern farms are now too low in price, whether we go West or East for comparison. Choice land in parts of Europe, more thickly settled than Massachusetts or even Connecticut, sells at \$200 to \$300 per acre, compared with \$20 to \$100 per acre in this section, buildings included in some instances.

Land is considered, the world over, the most desirable kind of property, because its value is most reliable, steady and permanent. The trouble in the eastern United States is not with the land; some of it is as good as can be found anywhere. The difficulty is from lack of demand. Farming had long been comparatively popular in the East, and has only somewhat lately reassured its hold upon the young men of business talents. In the West, in many sections, farming is the main industry, and is regarded as one of the most satisfactory careers for the bright young men of the community. Such a sentiment creates plenty of farm buyers and largely accounts for the boom in farm values. In the East where a choice farm that has made a competence for previous owners, and is still as good as ever, is offered for sale, the only bidder may be some foreigner with no appreciation of the real possibilities of the farm under skillful management.

Probably the worst days are over in regard to Eastern farm values. The whole country is growing very fast, the desirable free land is gone, and good land anywhere on the continent cannot always remain a drug on the market. It would be in harmony with the trend of events should a pronounced rise in Eastern farm prices take place during the next half dozen years. Meanwhile a good farm is an excellent property to hold, improve and develop, with a fair prospect of better market values to come.

A Famous Tobacco Crop.

Of those who are playing the game today—the difficult and dangerous, but still legitimate game of tobacco raising—there are not many who recall the great disaster of 1870, of which the following account is given by a writer in the Springfield Republican. All told, though, perhaps there never was a year better illustrative of the extreme vicissitudes of the tobacco farmer's undertaking. There is an old phrase which still hangs on the cynical lips of the tobacco buyer, "As bad as the '70 crop," which has not yet ceased to have a meaning. If people's feelings were not at stake, it would add to the historic story to tell of the mortgages not very long since paid—fearful heritages of this famous crop of 1870—and to speak of others who never really recovered from the financial shock of the disaster. It was the rainless crop, as some will recall. The soft but cynical smile of the old tobacco farmer as he tells the story seems to say to nature that she will have to bid high to get back into his good graces again. There was hardly a drop of rain from the last of June until the tobacco crop was harvested. No season ever dawned fairer. The young plants when set out were well cared for by nature and grew with characteristic rapidity. The hopes of the farmers at this critical time in the life of the plant were high. With that buoyancy found nowhere else, except in the breast of a true horseman, he began to look forward to a good crop. Then came those long days when the unmerciful sun day upon day sent its hot rays upon a parched and unprotected soil. But the start which the plants had obtained helped them to survive the shock. Though the farmers could not recall such a year before, and feared the result, the crop was poised, with the heart of the farmer still beating high.

It was a deceitful year. The farmer had obtained money for his fertilizers in many cases by mortgages, or, as was the custom in those days, had supported large herds of cattle for the purpose of fertilizing, and had spent his money to plant and gather the crop. The disaster awaiting had not yet dawned upon him. The tobacco in due time was picked, cured, and in due time, would be ready for the market. Old smokers will readily recall that the fashion before 1870 was for dark cigars, but at about that time the light cigar began to be called for. "It was hardly time to market the crop of 1870," said one of the speculators of the day in recalling the crop, "and we had not sampled the crop ourselves and knew very little about how it was coming out. What the farmer wanted more than anything else was to get rid of fair prices of the crop of 1869. This was dark in color and what the market had demanded. I remember very well of being asked by a Philadelphia dealer about

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the 1870 crop and of showing some leaves taken from one of the cases not then sampled. He wanted to see the crop, and we hastened from Philadelphia to Springfield, Ct., to see it. He bought a large order for forty-five cents a pound. Returning immediately to Pennsylvania, I was at the breakfast table in a Philadelphia hotel, one morning, when someone tapped me on the shoulder. I saw who it was and made up my mind that a 'kick' was in store for me. I had instead a prospective customer. He also wanted to see the crop, and I journeyed to Springfield again, and another lot was sold at fifty cents a pound. The speculative fever then took hold of me, and I bought other crops, going from farm to farm. Two hundred of the cases bought I shipped to Pittsburgh."

Suddenly the bubble of prosperity broke. When the tobacco was supposed to be ready for use it was taken from the cases. It was all up then. The tobacco was gummy and tough, and when made up into cigars had only one good quality in the manufacturer's eye—lightness in color. No one who ever was obliged to sit in an office or room where one of the cigars of the '70 crop were being smoked ever forgot it. The most disreputable piece of cabbage leaf never gave forth a more repulsive odor. The crop was a flat failure. The cigar manufacturers who had bought it were "stuck," as they put it. The farmers who still held it considered themselves lucky to get rid of it at half the money which it had cost them to raise it. The Philadelphia buyer who had got early into the market failed later, and, like many others, always attributed his failure to the crop of 1870. The farmers with their mortgages went down, too. The trouble was that the manufacturers who made up the cigars lost trade which they found hard to secure again. Even a reaction in the style came as a result of the crop. Everybody was afraid from that time of the light-colored cigar. Customers again preferred the dark, though the light wrapper is today in vogue again. The financial shock to the valley farmers was tremendous, and while many recovered, probably more went to the wall that year than in any other in the memory of the oldest living grower today.

Farm Wagon Wheels.

Regarding the influences of high or low wheels on the draft or farm wagon there is considerable difference of opinion. The Missouri station has put the matter to practical test in a series of trials made on macadam, gravel and dirt roads in all conditions, and on meadows, pastures, cultivated fields, stable land, etc. With a net load of two thousand pounds in all cases, three sets of wheels were tested, as follows: "Standard—front wheels, forty-four inches; rear wheels, thirty-six inches; rear wheels, forty inches. Low—front wheels, twenty-four inches; rear wheels, twenty-eight inches." The results obtained and conclusions reached were, in brief, as follows:

For the same load, wagons with wheels of standard height drew lighter than those with lower wheels. The difference in favor of the standard wheels was greater on road surfaces. Low wheels cut deeper ruts than those of standard height. The vibration of the tongue is greater in wagons with low wheels. For most purposes wagons with low wheels are more convenient than those of standard height.

Wagons with broad tires and wheels of standard height are cumbersome and require much room in turning. Diminishing the height of wheel to from thirty to thirty-six inches in front and forty to forty-four inches in the rear did not increase the draft in as great proportion as it increased the convenience of loading and unloading the ordinary farm freight. Diminishing the height of wheels below thirty inches front and forty inches rear increased the draft in greater proportion than it gained in convenience. On good roads, increasing the length of the rear axle, so that the front and rear wheels will run in different tracks to avoid cutting ruts, did not increase the draft.

On sod, cultivated ground and bad roads, wagons with the rear axle longer than the front one drew heavier than one having both axles of the same length. Wagons with the rear axle longer than the front one require wider gateways and more careful drivers, and are, on the whole, very inconvenient and not to be recommended for farm use. The best form of farm wagon is one with axles of equal length, broad tires, and wheels thirty to thirty-six inches high in front and forty to forty-four inches behind.

A Farm Workshop.

Much has been written on labor-saving tools for the farm, all of which has been read with great interest by myself and others. I will now describe my workshop which I find is a great convenience on the farm, also a great saver of money that one would have to lay out for repair work, besides the time that one would spend going and coming. Size of building is 20x22, story and a half, with basement; also, a wing 12x14. In one corner of the wing stands an eight-horse power gasoline engine. The rest of this room is given to my wife for a laundry-room. Here is placed a power washing machine from which a faucet drains the water through a pipe which carries it out of doors. By the use of a small cord and pulleys the end of a shaft is drawn into a loose belt, which in turn runs a pump on an eight barrel cistern outside. This brings the water to the cooling tank for the engine, which holds eight barrels. Through the circulation of the water around the engine, that on top of the tank is kept nearly at the boiling point when the engine is running, and, being clean water, it is used by my wife for washing, being drawn from the tank into the tubs through a siphon. The desired temperature can be obtained by raising or lowering the siphon in the tank. There is no lifting of water in or out. So much for helping my wife, who, with me, has helped to make all the comforts of our home. In the next room stands a saw table, where all cutting and ripping of lumber is done for all work that may be required for work on farm or buildings. In one corner is a turning lathe for wood, while on the opposite side there stands a power corn

sheller and small feed mill. Here my grain is ground to be fed to stock. My book shows that last year my neighbors brought their grain to be ground to the amount of \$100; this was done even in rainy days and in cold, stormy weather, so that no time was taken from farm work. I should say that one side of my workshop is occupied with my work-bench, with a set of carpenter tools, also a shoe and harness repair outfit, so that everything is kept repaired and ready for use when needed. A husker was added to my farm tools last fall, and my engine furnished power to husk forty-five bushels per hour at an expense of ten cents per hour while running. I am drawing all the corn with one team and starting and stopping the engine as desired. An emery stand grinds my plow points, while a buzz saw cuts my wood. One more word to farmers. Don't buy a gasoline engine too small. My first purchase was a three and a half-horse power, and was soon overloaded with work, and was replaced by an eight-horse power.—H. H. Ames, in St. Louis Globe-Democrat.

Success in Field Drainage.

The problem of drainage is frequently a difficult one. When possible, tile drainage is always the best method of disposing of standing water. Rubble drains, which have been used to a large extent in Maine, are costly and as a rule not wholly satisfactory. The time and labor spent in handling the rocks will cost far more than the necessary tile. The amount of earth that must be handled in digging a ditch wide enough for a stone drain is also more than twice that needed for a good tile drain.

The principal cautions to be observed in tile draining are: (1) That there is a good outlet. (2) That the main tile is large enough to carry off the water brought in by the laterals. (3) That there is a uniform fall. (4) That only perfect tile is used. (5) That the joints are carefully placed and covered with paper to prevent rattling in of loose earth. (6) That the earth is tramped in firmly after laying the tile.

As the successful operation of any system of tile drains depends upon the outlet, this should be large enough and low enough to permit the water to escape freely and should, as a rule, be screened in such a manner as to prevent the entrance of vermin. The size of the main tile, of course, depends upon the area to be drained, but in general for a field of three acres a main tile of four inches is sufficient and two-inch laterals placed twenty-five to forty feet apart will be effective. In ordinary operations a six-inch main will be found large enough for a twenty-acre field.

The fall should, from start to finish, be as nearly uniform as possible. Sometimes, however, a change of grade is necessary. In such cases it is best to change from a lesser to a greater fall rather than to reduce the grade, as if the grade is reduced, there is liable to be a deposit of sand and silt which will in time clog the drain. In general, a fall of five or six inches to one hundred feet is abundant.—Prof. W. M. Munson, Orono, Me.

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KNITTED GOLF GLOVE

Material: Three-thread Columbia Saxony yarn, two skeins. Four steel needles, No. 16. Cast on 65 stitches, 3 plain, purl 3, alternating for twenty-five rows.

Right-Hand Glove—The palm facing the knitter and the thumb on the left-hand side. Make 13 plain rounds, on the fourteenth round begin to increase for the thumb by knitting the first stitch plain, and knitting 1 plain, and purling 1 in the next stitch. Knit 27 stitches plain, knit 3 plain, purl 3 for the remaining stitches of round.

15th round—Like 14th round.

16th round—Knit 31 plain, 3 plain, purl 3 for the remaining stitches of the round.

17th round—One plain, and increase 1 in next stitch, 29 plain, purl 3, 3 plain for the remaining stitches of the round. (This reverses the pattern, thus forming a small bow.) Continue knitting in this way until you have increased 27 stitches, being careful to reverse the pattern, or blocks, every 3 rounds, making 93 stitches on the needle.

Thread a needle with coarse cotton, pass it through the 27 stitches knitted for the thumb. Tie the cotton. Continue to work in the round, as plain, for 36 rounds.

First Finger—Six plain, take a needle and thread and pass it through all the stitches on the hand, except the last 13 stitches. Now work a third needle. Cast on 4 stitches—this is for the inside of the finger. Divide the stitches for the fingers equally on 3 needles. Continue to knit plain in the round for 30 rounds, then decrease by knitting two of the inside stitches together. Knit 6 rounds plain, narrow, and then knit 3 all around until you have 8 stitches remaining on the needle, draw the wool through the 8 stitches, draw together, fasten the wool firmly on the wrong side.

Second Finger—Put the next 7 stitches from the inside of the hand, on a needle. Cast 4 stitches on another needle, then take the last 8 stitches off the thread on a needle. Now pick up the 4 stitches, cast on for the first finger and work as before, making finger 6 rounds longer previous to beginning to decrease.

Third Finger—Take 7 stitches from inside of hand, cast on 4, take the last 7 stitches off thread, pick the 4 stitches from the inside of second finger, and knit as directed for the first finger, making 3 rounds more before beginning the decrease.

Fourth Finger—Take all the stitches remaining on the thread, and pick up the 4 stitches from inside of third finger. Knit 36 rounds, decrease as before, and finish the same way.

Now finish the thumb by taking stitches off thread on three needles. Work 30 rounds plain, and finish off as directed for finger.

Left-Hand Glove—Work as directed for the right hand, but you have put your stitches for the thumb on to the thread. The thumb must now be on the right-hand side, and the back of the glove toward the knitter. With this way of holding your work, each finger must be commenced.

EVA M. NILES.

Scrofula.

Formerly one of the greatest of scourges, the terror and even the ruin of many innocent young lives, scrofula, is now, under the more hygienic conditions of modern life, becoming less and less common.

It was formerly regarded as a constitutional disease, hereditary in character, a cousin possibly to consumption, yet of different nature and origin. Today, however, physicians are inclined to look upon it as a form of local tuberculosis, confined at first to the glands of the neck, but liable to enter the circulation, and thus reach the lungs or the brain, and so set up pulmonary consumption or meningitis. The germs of the disease are believed to enter the system through the tonsils or some other part of the mouth or throat, and to be carried thence directly into the lymphatic glands of the neck.

The management of so-called scrofulous children—that is to say, of pale, delicate children, with poor appetite and sluggish digestion, who are subject to catarrhal troubles, and in whom little scratches of the skin readily become sore and heal slowly—is twofold. They must be made more resistant to infection, and the possible ports of entry of the germs of disease must be strengthened against attack, for they are not yet scrofulous; they are only in danger of becoming so.

The first object is to be attained by good feeding, tonics, small doses of cod liver oil, if this agrees with the stomach, outdoor life, residence at the seashore or in the mountains, if that is possible, and all the other things that conduce to the making of robust children. The month and throat must be looked after. The teeth must be kept clean and in good condition, catarrhal conditions must be treated and enlarged tonsils and "adenoids" must receive prompt attention.

If the disease is established and the glands of the neck are enlarged and full of matter, there is only one mode of treatment that promises a cure and the prevention of consumption, and that is to cut out the glands. The operation is not usually a very serious one. It extirpates the disease root and branch, and the scars that remain are very small and inconspicuous as compared to the large and deforming ones that follow when the glands are allowed to suppurate and break.

What We are Living On.

Hardly two scientists agree as to the age of the earth—that is, as to the length of time which has elapsed since the earth's crust became solid. Considering the very slow rate at which rocks are deposited by water, and the immense thickness of the beds of these "stratified" rocks as they are called, it seems that at least one billion years have passed since the globe evolved in its present shape out of the whirling mass of incandescent matter which it must once have been.

But Lord Kelvin, arguing from the known rate of loss of heat declares that not more than one hundred million years is the limit of time which has passed since firm rocks appeared and life began upon the earth. More recently Professor Tait has shown reason to believe that a tenth of Lord Kelvin's estimate may be nearer the truth. All geologists, however, declare that the latter estimate is too low.

We know with the utmost exactitude how heavy our little world is. If you put down the figure six and follow it by twenty-one naughts, you have it within a very few millions of tons. Roughly speaking, this implies that the earth is five and a half times as heavy as a globe of water of the same size. But, in spite of this accurate knowledge of the earth's weight, we have no real idea of what is the condition of things inside our planet. Thousands of experiments made in all parts of the world show that the tem-

perature rises on an average about one degree for every sixty feet below the surface. If this rate of increase continues regularly toward the center, that of the globe must be at a heat so appalling that imagination is unable to grasp it. When this fact became ascertained, geologists got the idea that we were living upon a furious furnace, of which volcanoes were the escape pipes.

Now we know better than that. We have found, among other things, that an earthquake in Japan is able to register itself in England. This actually happened in the case of the disaster in north Japan four or five years ago, when thirty thousand people lost their lives. A tremor of this kind could not pass unless the earth had a rigidity approaching that of steel, and observations of tides and the attractions exercised upon us by sun and moon have made it pretty certain that our world is just about as hard and solid as so much steel.

This does away with the liquid interior theory and makes it fairly certain that the earth is solid all through, with perhaps occasional accumulations of fluid rock here and there in parts where, for some reason or other, the pressure is not so great as it is in others.

It also upsets the old theory of volcanoes, and the modern idea with regard to these mountains of death and destruction is that water from the surface finds its way through a few miles below the surface, and then, being suddenly turned into steam, causes an explosion, or series of explosions, like boiler burtings on a gigantic scale.

Every schoolboy knows that the shape of the earth is an oblate spheroid—that is to say, that it is flattened a little like an orange at the two poles. The polar diameter of the earth is actually twenty-seven miles less than its diameter at the equator. But it is as yet not absolutely ascertained whether the flattening is similar at both poles. Some Arctic explorers appear to be of the opinion that the flattening is greater at the North than at the South Pole.

Another rather startling fact which has recently been demonstrated is that the equator is not a perfect circle. If you could drop a plumb line from Ireland through to New Zealand it would be somewhat longer than another which cut the earth at right angles to it. The difference has not yet been ascertained with absolute accuracy.

We are accustomed to talk of sea level as an invariable quantity. It is positively startling to find how far from level the sea is. Not, of course, merely from the passing influence of tides and winds, but there are great and permanent elevations in the sea—positive mountains, in fact. It is calculated that in the Bay of Bengal the water lies at a level exceeding that of the Indian Ocean by fully three hundred feet, and that of the Pacific Ocean along the coast of South America may be heaped up as much as two thousand feet higher than the water in the opposite Atlantic.

These water mountains depend upon the attraction of great mountain masses, the Bay of Bengal upon the Himalayas and the South Pacific upon the American Andes. The height of our highest mountains has been measured to within an inch or two, and we have accurate information on the subject of the great depths of the sea. But we do not yet know with any certainty how deep is the atmospheric envelope of the earth. At one time twenty-seven miles was given as the limit. This was increased to forty, and soon even this estimate was extended to one hundred.

Our only means of measurement is by the meteor, which spring into an incandescent blaze through friction when they strike our atmosphere. As man cannot live at a much greater height than five miles, it may be that we shall never learn exactly how thick is the atmospheric ocean at the bottom of which we crawl.—St. Louis Globe-Democrat.

Egg Lore.

Frog eggs are almost transparent. They are laid in long linked chains, in stagnant water, and show there like unassuming ropes. Fish eggs are likewise almost transparent.

It is possible to watch the development within their filmy walls. An odd thing about them is that the fry appear to develop almost wholly from the albumen. The yolk-sac remains intact, and clings as a sort of stomach after the fry are swimming about; indeed, they are nourished by the yolk-sac throughout the first weeks of existence. It shrinks and shrinks as it is gradually absorbed, until at last it becomes invisible.

Egg production varies enormously. A hen's capacity is about four hundred eggs, divided pretty equally through the first three years of her existence. Other domestic fowls lay much fewer eggs. Against this, fish lay from three thousand to one hundred thousand each season, according to the species. Turtles lay one thousand a year, and live a hundred years, and insects lay in the course of a few weeks anywhere from three to five hundred eggs.

An odd fact regarding turtle, alligator and crocodile eggs is that the young are born out of them some several days before maturity, yet live and thrive. Further, they make for water instantly, and will snap viciously at anything which comes near them, or resent to the utmost of their power, an attempt to turn them from their chosen way.

House-Cleaning.

In my few years experience in house-keeping I have yet to see the propriety of allowing dust, grease and cobwebs to accumulate until the proper, or rather popular, season arrived for their removal. There is a more satisfactory method as follows:

First of all sanitary conditions being considered, matings, and still better, hardwood floors and rugs are preferable to wool carpets that are nailed down for a time indefinite. In my opinion, these are little more than the favorite haunts of moths and disease germs. When the curtains begin to look grimy, and musty, and the room needs a general refreshing-up, that is the time to clean it. Remove every possible thing from the room, sweep it thoroughly, and wipe the walls with a clean cloth. In washing the matting, put salt in the water; for wood-work, kerosene; for window-glass and pictures, ammonia; and for furniture use plain water rubbing afterward with a dry cloth. Rugs, hangings and pillows should be clean and well aired at all times. Having replaced the furniture and freshly ironed curtains, the room will present that restful appearance that cleanliness alone can give in December as well as in June. In this way the entire house can be cleaned at leisure, and no two rooms will require it at the same time. In like manner cupboards, closets and drawers should be carefully renovated as required, thus preventing work coming in heavy loads. "How many times is this process repeated in a year?" The good housekeeper is sole judge. Much depends on the location, the size of the family and the occu-

pations of its members. Should a room require new wall-paper, why wait until the season when there is a general demand for paper-hangers, when at any other time you would receive better service? We are all familiar with one of the common ways of cleaning—the entire house, from attic to cellar, is put into a general mixup; the porches, front and back yards, fences and clothes-lines are filled to the uttermost; the paper-hanger postpones his appointment two weeks; the woman who never before failed to be on hand on such occasions is taken suddenly ill; the children are late to school because they cannot find their belongings; the husband dines at the restaurant, or is served on the kitchen table; and the devoted mind is relieved by the one hope to be many miles away when the next anniversary of cleaning time is celebrated.—Woman's Home Companion.

Necromancer of the Kitchen.

A visit to the kitchen of one of the cheap restaurants, say to one of the plain American variety as a sample, discloses how much the every-day Yankee restaurant cook can bring out of little. A look at the bill of fare before penetrating into the realm of the necromancer who juggles with the edibles in the rear will increase the wonder. There are listed four or five different kinds of soup, as many, perhaps, of fish, half a dozen roasts, an ample array of made dishes, pies and puddings, and all the vegetables, canned or fresh, in ordinary use anywhere.

Any one who did not know might suppose that to cook and keep ready in quantities such an array of dishes would require an immense range, several ovens, and plenty of space. In reality, the kitchen is no bigger, or is even smaller, than that of an ordinary house, and one or at most two assistants to wash dishes are all the one plain Yankee cook requires.

Suppose a waiter comes with an order for vegetable soup. The cook lifts the lid of a big boiler of clear soup, made by boiling bones and scraps of beef, mutton, chicken and other things. Out of this he dips a bowl of soup, and into the bowl he drops quick succession a little from each pot of boiled vegetables he is serving for that day. He gives it all a stir, and presto! there is your vegetable soup.

For all the orders for soup that come in the cook goes first to the big boiler. Is it consommé? From a big pitcher the cook pours into the clear stock some brown thickening fluid. Is it macaroni? A pot of boiling water is near at hand, and he forks a few strings into the bowl. Is it oxtail? A big tin of condensed oxtail soup stands on a handy shelf, and a spoonful lends its flavor to the stock. Is it chicken? He thrusts a pair of tongs into the boiler and brings up morsels from the depths until enough scraps of chicken are found to pass muster. Is it tomato? A squirt of weak but thick tomato soup does the business.

See the cook next lift that magic wand of his which looks so much like a carving knife. Roast lamb and roast mutton come from the same joint at his touch; and by the aid of a little sauce and some jelly so will roast venison at a pinch. Roast rib or roast loin from the same piece of beef depends altogether on his carving. Veal is turkey, or it is chicken for salad, or it is turkey for fricassée, or it is rabbit for stew, or it is lamb for pie, just as he desires.

The plain old oodfish, too, if boiled, is turned into boiled halibut, or haddock, or bluefish, and if baked becomes baked halibut, or bluefish, or haddock; at his mere touch with the aid of a few biting sauces they become almost anything one can name in the way of fish.

When it comes to dessert, the distinction between fruit cake and plum pudding is with him only the difference between hot and cold and vanishes before the blast from his oven. Baked rice—frequently called upon for a curry—with milk, sugar and a little nutmeg, is straightway rice pudding. Tapioca and sago come out of the same dish. It is a wonder how he remembers all the names he calls his cottage pudding.

You may talk about the French or Italian chef, but the Yankee knows a few tricks of the trade, too.—New York Sun.

Helps for Young Mothers.

Don't be afraid to use common sense in the care of your baby.

Don't forget that regularity in mealtime is just as necessary for your little one as for yourself.

Don't stuff the baby until nature rebels by an emesis.

Don't expect the baby to be perfectly well unless you feed it on nature's food—mother's milk.

Don't forget that it wants cool water to drink occasionally.

Don't keep the baby in the house one minute that it is possible to have it out doors. A baby kept out in the air and sunshine will not be cross and irritable.

At night, be sure the room is well ventilated. Its susceptibility to sickness is in inverse ratio to the amount of good, pure air you provide for its lungs.

Don't put too many clothes on the baby, and, above all, don't inflict it with long clothes. Least of all should this be done during its first few months of life, when it is weaker than at any other time.

Don't fasten its clothes like a vise and then think it is going to be comfortable. A child can't be happy unless it can move every muscle of its body freely.

Don't bundle up its head to suffocation. Don't cover up its head except in a blast of wind.

Don't be cross and irritable about the baby, and then be surprised that it reflects your mood.

Don't let people outside the family kiss the baby. Never so trample on your child's rights as to make it submit to an unwelcome caress from any one.

A child has a natural dislike for "showing off," and if you make it acquire a taste for such a proceeding you will have to spank it later for being forward and impudent.

Be calm and self-contained always in the presence of your little one, from its days of earliest babyhood.—Tribune.

Domestic Hints.

FRENCH BEANS, A LA MAITRE D'HOTEL.

Pick and string the beans, cut them up and shred into three or four strips; wash them in plenty of water in a colander, and throw into a stewpan containing boiling water and a handful of salt, and boil briskly until tender; they must be drained in a colander, then immersed in cold water for five minutes, and drained upon a napkin to absorb all the moisture. Next, put a gravy-spoonful of Béchamel or Supreme sauce into a stewpan with four ounces of fresh butter, a tablespoonful of chopped and parboiled parsley, and a little nutmeg, toss the whole together over the fire until hot; then dish them up.

CONSUMERS WITH CHICKEN FORCEMEAT.

A delicious consommé with a garnish of chicken forcemeat is made as follows: Pick in a stewpan two raw chicken breasts and pound them in a mortar, adding an equal quantity of stale

home-made wheat bread which has been soaked in milk until it is moist. Add also, when the chicken, bread and milk are well mixed, four egg yolks, a tablespoonful of butter, with a liberal seasoning of salt and pepper. Now add a little white sauce, not more than three teaspoonfuls. Pour the mixture into six small tin cups, the size of small timbale moulds. They should be small enough just to hold the mixture. When they are filled set them in a pan of boiling water to poach. In two or three minutes set them where they will cool, then turn them into the tureen and pour a quart of consommé over them. Add a few crackers for further garnish and serve immediately.

INDIA CURRIED ONION.

Fry sliced onions in butter or other good fat; salt well. Add one teaspoonful of curry powder and stir in two raw eggs. Add a few drops of lemon juice just before removing from the fire.—What to Eat.

FARMER'S PUDDING.

One quart of milk, one cup of corn meal, one cup of currants or raisins, one cup of chopped suet, one-half teaspoonful of salt, one teaspoonful of ground ginger, one-half cup of flour; one tablespoonful of baking powder. Put the milk in a double boiler over the fire. When hot, stir in the corn meal and cook until smooth and creamy. Then add the suet, and when cool, not cold, add the currants, nut, salt, ginger and the flour and baking powder sifted together. Mix well, turn into a greased mould or kettle, and boil or steam three hours. Serve hot with apple pudding sauce.

STUFFED EGGPLANT.

Cut an eggplant in two and scoop out the inside, leaving a wall about half an inch in thickness. Chop the pulp you have taken out with half a cup of breadcrumbs, season with pepper and salt and a very little nutmeg. Soften the mixture with half a cupful of weak stock, put in a tablespoonful of melted butter and a beaten egg. Fill the two halves with this mixture and put them in a pan, pouring about them a cupful of seasoned stock. Bake for an hour, basting often, then sprinkle the filling of the eggplant with crumbs and bits of butter and leave the pan in the oven long enough to brown the crumbs. Transfer the eggplant to a hot dish and thicken the liquid in the pan with a tablespoonful of each of butter and flour, cooked until smooth. Pour this over the eggplant in the dish and serve.

DATE PIE.

This is the aristocratic cousin of the old-fashioned pumpkin pie. To make it, take half a pound of dates, boil tender in a small quantity of water, put through a colander, add one egg, one tablespoonful of cornstarch or flour, a little cinnamon and one pint of milk. Bake with one crust, the same as custard pie.

Hints to Housekeepers.

For New Century plum pudding take one-half cupful each of butter and sugar, three eggs well beaten, two cupfuls of flour, three teaspoonfuls of baking powder, 1½ cupfuls of milk and one cupful of raisins chopped fine. Cream the butter and sugar, add the eggs, gradually sift the flour and baking powder together, and add alternately with the milk. Add the raisins and bake in gem tins in a moderate oven. Serve with any good, rich sauce.

Add a little vinegar to the water in which you poach eggs, to prevent the whites from spreading. Breaking each egg into a cup about a quarter of an hour before it is to be used will also help.

In washing table-linen, or any cloth stained with egg, avoid putting it in boiling water, which will set the stain. Put the cloth in cold water, and the stain can be very easily removed. The same rule applies to eggshells and any dishes stained with egg. If they are set with the other things, do not wash them, the stain will harden, and it requires considerable patience to remove it. Egg stains come out easily in cold water.

To ascertain the freshness of eggs without breaking, fold your hand around an egg, hold the egg between the sun or a bright light and yourself and look through it. If the yolk appears clear and the white surrounding it clear, it is fresh. A good egg will retain its shape when put into a bucket of water; if it topples around in the water, apparently standing on its end, it is fairly fresh; if it floats, beware of it. The shell of a fresh egg looks dull and porous; that of an old egg is shiny. When eggs are kept any length of time they lose their gloss by evaporation through the pores of the shell, and rattle or shake. This is not a sign of particular staleness, although stale eggs rattle.

Many persons use cocoa instead of chocolate for fudge and also for cake frosting.

In the cooking of poultry a good many things may be learned from foreign cooks. The use of a fowl's feet, for instance, which makes the average American shudder, is a foreign custom to be commended. Let any woman who doubts this ask her poultryer or butcher to cut off the feet from her fowl the next time she buys one and send them along with the rest of the bird. Then cut off the claws, which includes the first joint of the foot, and scald the feet in boiling water. This will loosen the outer scaly cuticle, which will turn off wrong side out like a stocking and leave the white tendons inside still in firm shape. Then put the feet into salted boiling water and cook until the bones fall apart. Strain and allow the liquor to get off the outer covering, without removing them. If the feet of a bird are allowed to scald until the tendons begin to give up gelatine, the gelatine will serve as a glue to adhere the skin to the foot beyond severance. They need thorough scalding, but no cooking.

Various is what every housekeeper is looking for. It is not always easy to find, and her best chance for it is in new combinations of old stand-bys. The familiar vegetables take on a fresh attractiveness when they appear in new dress. One grows as weary of them in their authorized state as one does of an old and well-worn gown. But the vegetables may be transformed more readily than the raiment and prove even more satisfactory. Stuffed vegetables of many sorts have come into use during the past few years and are generally popular. There will always be persons who prefer the plain in a simpler form, but there will be enough others with a taste for novelty to make the new dishes a success.

In any case, it is worth while for the housekeeper to try them for the sake of the change, even if she goes back later to the old ways. There is a likelihood that among the new recipes she may find some one or two dishes she wishes to retain on her list.

Fashion Notes.

The separate waist having fallen somewhat into disfavor, it is a comfort to learn that the separate coat is very much the vogue. Which is to say that it is entirely admissible to wear a half or three-quarters coat in dark material, with any sort of a dress skirt. The loose coat of cloth, velvet, or other handsome, heavy material, provided with very wide sleeves and trimmed with a velvet or lace collar is seen everywhere. Military coats are increasing in favor and some models are almost exactly like the fatigue jackets worn by American army officers. They have a fitted or half-fitted back, and are straight and loose in the front, extending about twelve inches below the waist. Flat braid borders a coat of this kind, the braid being carried around the top of the collar in a double row down the front and around the hem. All corners are square and the coat is closed with broad clasps. Epaulet pieces trim the shoulders.

Short coats are predicted by the keenest observers of fashion. There is no doubt that the general trend towards 1830 styles would logically bring in the short Eton with full sleeves and loose back, but fashion is not always logical in its processes.

A short coat is a great deal of the 1830 revival but it does not really mean much more than that shoulders are made to droop and that skirts are full and flowing again. The fashionable dress does not by any means conform to that of 1830. Reference to fashion plates and to portraits of that period shows that waists were admirably and quite a fair size of hips were allowed. Skirts were very full and very short, reaching barely to the ankle. Hoopskirts do not appear, but so many ruffled and starched petticoats belonged to the feminine toilette that the general effect of the skirt was flaring and bell-like.

At the present, although full skirts are in vogue, fashion demands that the figure

below the waist be made as slender as possible. The natural spring of the body, to quote an authority, must be concealed, or at least softened, as much as possible. To bring about this happy result corsets have been built with long extensions reaching far down over the hips in long points which are held in place by strips of elastic. Those that lace down the front are favorites, they assisting the concealing process in a manner short of marvelous.

Short skirts do belong to the 1830 period, but they belong to many others beside. Every so often women rebel against the trained skirt, and for a rest and change the short walking-skirt comes in. It always goes out, and that within a short time, for flowing draperies are too graceful, becoming and womanly even to be wholly abandoned. The breathing spell of sensible skirts for street and informal wear is in at present and women are making the most of it.

Braids, wide and narrow, are important just now, as they are used to a great extent, especially in graduated widths, the bottom row being three inches wide, and the upper being little wider than baby ribbon. Panels of the silk are plaited half way down and are attached to the skirt at the waist line, the pointed, fan-shaped ends falling over the rows of velvet almost to the hem. These are lace edged. The waist is tucked in groups and has a bertha-like arrangement for the same kind of panels as trim the skirt. They are very small, of course. Between the panels are run three rows of velvet ribbon. There is a high grille of velvet. This gown is really an adaptation of an 1830 style. The long loose panels falling over the velvet ribbon was a trimming device which appears in more than one fashion plate of the thirties.

Several pretty model gowns in light-weight woollen fabrics and cloth are worn with lace waists, either white or dyed to match the gown. The waist is trimmed with the cloth cut in strips, patterns, or stitched bands. A wood-brown velvet skirt is worn with a blouse of deep cream lace, appliqued over the lower part with a Greek fret design of the cloth. The upper part is untrimmed, as are the full sleeves. The collar and cuffs have strips of cloth over the lace. Another, a French gown, is of gray velours, the skirt laid in shallow box plaits with wide spaces between. There is a blouse of white Irish lace, which is connected, as it were, with the skirt by having pointed strips of the velours extending three inches toward the bust, and as far below the waist. A narrow belt confines these tabs, which are finished on either end with a small brass button. A sailor collar made of the tabs joined together has a tie of black satin. The lace sleeves are full, and have cuffs of alternate bands of lace and velours.

A blue Henrietta skirt is finished around the hem with three graduated tucks. The blouse of dyed blue lace is covered with round water spots of the cloth edged with the tiniest piping of blue chiffon velvet. There is a high grille of the velvet.

With the coming of cold weather the vogue of the chiffon veil is resumed. The newest thing is the scarf veil of chiffon, matching, or at any rate blending, with the color of the gown. The veil is forty-six inches long, and is hemmed at the ends or tucked or trimmed with lace to suit the wearer's taste. To one end of the chiffon is attached a fine wire ring, the chiffon being shirred firmly to the wire. The veil is then cut to a distance through the centre, making the chiffon a veil or a scarf to the over the head. It can be worn in several ways. The wire ring is placed on top of the head, covering the trimming. The veil covers the face, and the long ends are passed around the head, crossed in the back and tied in front. Turning it around so that the split side is forward, cross the ends under the chin, and tie in the back. This gives a quaint effect of a hood—once an essential part of a woman's costume. A gauze of dotted net veil covers the face.—New York Evening Post.

Current Happenings.

The Rev. John Cotton Brooks, so well known in Boston through his family which has long been identified with the life of our city, is well known as the rector of Christ Church, in Springfield, which is one of the largest Episcopal churches in New England. It is hardly necessary to say that he is a brother of the late Bishop Brooks, and is the youngest of six brothers, four of whom entered the ministry. When the Rev. John Cotton Brooks was called to the church, it was struggling with a debt of \$40,000, and this the new pastor immediately set to work to reduce, and four years ago the last installment was paid. He also built a parish house at the cost of \$15,000, purchased a new organ for \$5000, obtained \$10,000 for the building of St. Peter's Church, and in all through his efforts \$300,000 has come into the church since Christmas Day, 1878, when he became its rector. The valuation of the church property, in-

cluding the church, rectory and parish house, is \$180,215. He is a pastor who combines religious zeal with practical qualities that have made his labors of great benefit to his flock, and he may, indeed, be called a good shepherd. He is the youngest son of William Gray Brooks and Mary Ann Brooks, who were of distinguished ancestry, and his only surviving brother is William Gray Brooks, a retired banker of Boston. George Brooks, the only other brother of John Cotton Brooks who did not enter the ministry, was killed in the civil war, and to his memory Phillips Brooks tenderly dedicated one of his books. The Rev. John Cotton Brooks was born in Boston, Aug. 29, 1849, and was for Harvard College in the Boston Latin School. At the recent silver jubilee of his pastorate in Springfield, Bishop Alexander H. Vinton of the western Massachusetts diocese, Bishop W. N. May of Rhode Island and Bishop Frederick Burgess of Long Island, the Rev. Dr. Dabney D. Addison of Brookline and the Rev. Dr. Leighton Parks of Boston and others spoke affectionately and eloquently of the work performed by the honored rector during his long and eventful pastorate.

A recent writer, in referring to the Fifth-avenue Presbyterian Church in New York, points out that though it is probably one of the richest churches in the country, there was no display of wealth or worldly position among the congregation when he visited it not long since. He was welcomed as a total stranger and given one of the best seats in the house, and was not told to wait in the rear until all the regular attendants were seated. The congregation were plainly dressed people, and reminded him of old times in the Orthodox church in a New England country town. There was neither pretence nor aping of humility among the people present, but all sang heartily together the hymns that were given out. On the church list one finds the names of Brice, Bigelow, Harriman, Hyde, Inman, Irwin, Jessup, McGibbon, Marquand, Shepard, Van Rensselaer, Wainwright and other millionaires side by side with the names of Lim Ling and Chn Kwong, laundrymen, and all the wealth of this church is freely given to religion and charity. Last year it contributed \$225,000 to such purposes. To home missions it gave \$57,000, to foreign missions \$27,306, to the freedman of the South \$4940, to miscellaneous charities \$83,812 and its own congregational fund amounted to \$41,379. On a recent Sunday devoted to a collection for home missions \$11,000 was contributed. Verily, the rich people of the Fifth-avenue Presbyterian Church must believe that they are lending to the Lord when they contribute so generously on one occasion. But the best feature about the church is its democratic spirit, which humbly acknowledges that all are equal before heaven, and that great riches are temporary possessions that cannot be carried beyond the grave.

The New England Hospital for Women and Children has issued a memoir of Dr. Marie Ehabeth Zakrzewska, popularly known as Dr. Zack, who was the founder of the institution and for forty years its leading spirit, one who preferred "to be remembered only as a woman who was willing to work for the elevation of woman." The biography is full of inspiration for those who are struggling to obtain an education and shows what an energetic, devoted and large-hearted woman can accomplish by persistent application. She wanted to help suffering humanity, and she succeeded grandly in her noble endeavor. The two portraits given in the memoir, showing her at different periods of her life, give some idea of the strong, benevolent and earnest character of "Dr. Zack." Her last message to her friends appropriately concludes this deserved tribute to departed worth.

One of the principal contributors to the new building for a practice school and kindergarten at Atlanta University is George Foster Peabody, who was born in Georgia, but is now a resident of New York city. This addition to the educational resources of the university is to be used in connection with the Normal Department, which, with the other branches of the work of the institution, is doing so much toward improving the intellectual condition of the Southern negroes, by combining the higher scholastic training with industrial instruction in a very practical way.

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The Horse.

Raising Colts.

I wean my colts at about four months of age, and put them in a box stall, where I can handle and tame them. If they have not been halter broken, this is one of the first lessons. My experience is that to teach them to eat apples, oats and ground feed, is a great help to them, and for a drink I give warm water with a handful of shorts in it, giving them drink four or five times a day. I also feed grass, and coax them to eat, so they will not fall away. As soon as they get to eating well I give them what grain, mostly oats, they will clean up, and two or three times a week I give apples or potatoes cut fine. If possible, I turn them into a large, sunny yard for several hours every day. If not, they can be well exercised to the halter. I aim to raise a good, strong, healthy colt, either for speed or draft, and for the first year I treat them about the same. Later, to develop speed, I give the colts with trotting blood some light, regular exercise, to help develop muscle, and am careful not to over-exercise them.—W. H. Hall, Dover, Me.

The Demand for Horses.

The extension of trolley roads into the country, and the growth of population along them, in some instances caused more horses to be kept, as some families who move to the country spend, in the keeping of horses, money formerly used in the paying of rent.

As a result of general prosperity, also, some families have been enabled to own country places, and many to keep more and better horses, both on the farm and in the city. The great demand since 1885 for wheat and other cereals for export calls for the use of more horses and mules to cultivate the land. The increased call for beef and animal products, for home consumption and for exportation, requires the production of increased quantities of corn and hay for feeding purposes, and indirectly necessitates the employment of more horses and mules on the farm. These have been the most potent factors in creating a demand for horses. Prices began to advance slowly about 1887, and since that time have risen sharply, as is shown in the table of average values given by the Department of Agriculture.

The year 1903 has been one of speed not only in trials against time, but in races, so we must look farther than the wind shield and pace following for the cause. The future will show that one great reason for the increase comes from improved training. We are only just beginning to learn, writes Frank G. Trott in the Boston Globe, how to prepare a horse, either for a race or an attempt against time. How many trainers who fit horses as they did a dozen years ago get one inside the money nowadays? Very few of the old-guard trainers are able to get a horse to the races at present, and important, that the average trainer has changed greatly in the past few years. The changes have been brought about so slowly and taken singly have been so unimportant that the average trainer has not noticed them, and has unconsciously drifted along. The tracks are better cared for than ever before. It is a rare piece of earth that remains fast without lots of water and a vast amount of harrowing, brushing or floating, and the fact that fourteen world's records were made in eight days, A. M. Howe, the superintendent, works about a dozen men and twenty mules from sunrise until dark. Another thing that has given us so many fast miles this year is the attention owners and trainers have been giving to getting records. Lou Dillon, from the day of her purchase last May by Mr. Billings, was prepared with only one object in view—the world's record for trotters. Dan Patch was trained for the sole purpose of defeating Star Pointer. Early in the season it was found that Major Delmar could get no races, so the only thing to do was to get him ready for a try at the watch. The gelding record, 2:03, was the desired object. Then, as he came on faster than any one thought him capable of, the trotting crown was sought. This he never secured, but he finally landed inside the two-minute mark.

The colt should be taken from its dam at 3 to 4 months old, for if allowed to follow her longer it will not, in my judgment, be of any particular advantage to the colt, and if the mare is a regular breeder it will not only be a tax on her health and condition, but will retard the coming colt.

It is well in weaning a colt, when possible to do so, to place it in a box stall beside the mother's stall, as it will be much more quiet and contented if it knows its mother is near.

The colt should be taught to eat oats with its dam before weaning time. This can easily be done by feeding in the pasture, using a large, low box and scattering the oats over the bottom so the mare cannot eat them very fast, thus giving the colt time to nibble the oats.

Good Crops on Muck Soil.

Within recent years large areas of these muck lands of Allegan County, Mich., have been drained and reclaimed and are now under systematic cultivation. The Clyde Swamp has been almost entirely drained within the past eight years, and is now laid out in extensive farms cultivated to peppermint, truck crops, grains and grasses. In Allegan County the production of peppermint oil is the most prominent industry on the muck soils, and this crop forms part of a rotation of rough feeds for cattle. Gun Marsh is only in small part reclaimed, and the other scattered areas are variously utilized. Along the rivers and streams heavy cuttings are made of a coarse swamp grass, which is used as winter forage for cattle and horses. Where the soil is thoroughly decomposed excellent crops of corn, hay and barley may be grown, but one difficulty with the corn crop on muck soil is the tendency to late fall growth, and consequent damage by early frosts. Wheat is not produced by reason of its great tendency to winter-kill or lodge.

Among truck crops, cabbage and onions are prominent, the former yielding sixteen to twenty tons per acre, the latter from six hundred to nine hundred bushels. Besides these, small quantities of other vegetables are produced. Sugar beets are not a success, their greater size being had at the expense of sugar content and purity. Potatoes are not extensively grown, but they yield heavily and merit more attention. While the crops mentioned will probably continue of prime importance, there seems no reason why celery should not be produced on a large scale in Allegan County as profitably as in other sections of the State. At present scarcely any attention is given to the crop. Large areas of muck

convenient to the railroads still await improvement.

Cabbage and onions are of other crops grown to some extent on muck soils. Both are more or less profitable, depending largely on market facilities. The former yields from sixteen to twenty tons per acre, the latter from six hundred to nine hundred bushels per acre. The illustration shows one of the largest onion fields in the county. The price of onions fluctuates widely, rendering them a somewhat uncertain crop, but they are undoubtedly a profitable crop, taking one year with another.

Notes from Washington, D. C.

White corn smut is not an attractive sight in a field, and while in some cases it causes considerable loss, possibly \$100,000 a year in some of the corn States, there is one evil charged up against it, to which it is not entitled, said one of the officials of the Bureau of Animal Industry, in connection with a general discussion of corn as a stock food, and the fact that many farmers depend on it to an entirely too great extent and fail to realize the advantages of properly balancing their food ration. I know, he said, that the opinion is more or less general that eating corn smut injures cows. A number of years ago this bureau made a food test of large quantities of corn smut to two heifers. They were fed along with their regular grain ration about four pounds of corn smut daily for over two weeks. No effect whatever was apparent. The Michigan station, some years ago made a similar and more exhaustive test. Various amounts were fed to four cows, three Shorthorns and one Jersey, in addition to their grain ration. Two of them were fed as much smut as they could be induced to eat, finally reaching eleven pounds a day, evidently more smut than they could possibly get in foraging over a corn field after the removal of the crop, or in stables in winter when fed exclusively upon corn stalks as coarse fodder. The smut was fed for forty-nine days and relished by the cows. No unusual result whatever in temperature, milk yield or general health was perceptible.

Analysis of corn smut shows that it resembles coarse fodders, and contains considerable nutritive qualities, and no poisonous constituents.

Reports from Consul Gunsaulus state that the potato crop of Ontario is large. The average yield of potatoes in this province for the last twenty-one years is 115 bushels per acre. The crop usually follows clover sod, which is plowed late in the fall, the land being harrowed, cultivated and gang plowed in the spring. Planting takes place in May.

Consul Cuneo, at Turin, Italy, in a consular report describes the Italian chestnut trees and states that over \$12,000 worth of these chestnuts were imported into the United States last year. These chestnuts are almost as large as our horse-chestnuts. In Italy they form an important article of food. He describes the manner in which the Italians graft and bud the good varieties on to common stock, and thinks there is no reason why the crop cannot be grown commercially in the United States.

A large number of chestnut groves in different parts of the United States are now producing Italian and Spanish chestnuts, and new groves are constantly coming into bearing. The usual method probably in this country is grafting, although the chestnut can be either grafted or budded. This process is believed to be no more difficult than apple grafting. The writer secured from the late Professor Saunders of the Department of Agriculture a young and thrifty Paragon hybrid, a cross of the Spanish chestnut on the American sweet chestnut and one of the best flavored of the large chestnuts—and planted it in a gravelly situation. It should be borne in mind that chestnuts need a gravelly or loose under-soil into which the tap root can penetrate. This tree has grown somewhat slowly, but has borne very fine fruit every year, and numerous grafts have been cut from it to use upon the common wild chestnut. There are no chestnut trees in my woods. In order to get some improved chestnut trees into immediate bearing, I selected a number of scions, and picking out wild chestnut trees in a piece of woodland near by, with diameters of two or three inches, sawed them across about six feet from the ground and inserted the scions. These took well, and it then became an easy matter to transplant the trees onto the place.

Where chestnut trees already grow in your own woods, the way to secure a highly profitable chestnut grove is to cut off the old trees, whereupon sprouts will spring up, which, after a couple of years growth, can be grafted to improved varieties. I don't know much about the commercial feature of chestnuts, but I think I would rather have ten acres of cut-off chestnut land in bearing Paragons than ten acres of Florida orange grove.

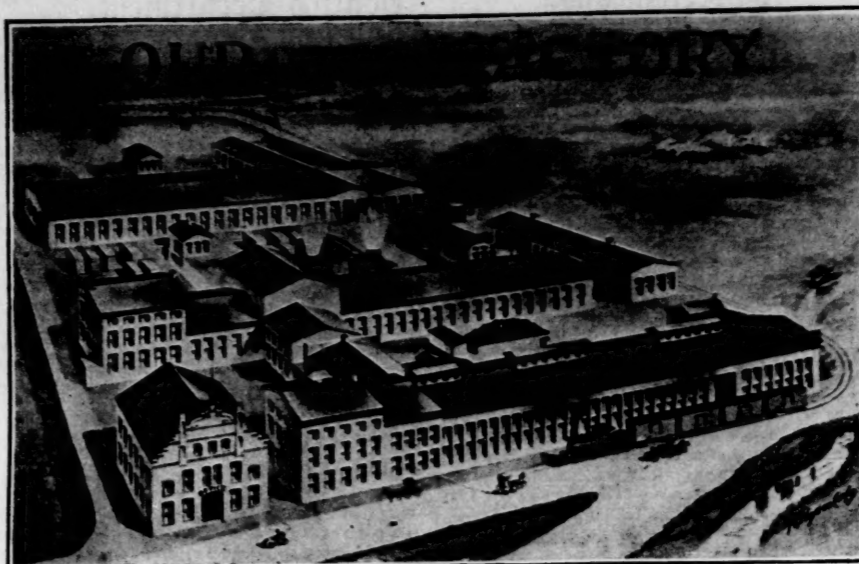
The startling information is announced that the Deutsche Solvay Werker Aktiengesellschaft is beginning to mine potash in Saxony. It is hoped that the D. S. W. A. will not get into the habit of advertising extensively in this country.

The recent dry weather and low-water conditions in many sections of the country, resulting, as it is claimed, in numerous cases of typhoid and malarial fevers, almost amounting to an epidemic in some States, directs attention to the necessity for the exercise of great care in water drinking. As the country becomes more and more thickly settled there is increasing danger

THE CUTAWAY HARROW COMPANY'S WORKS.

These works, as illustrated herewith, are located at Hingham, Ct., U. S. A. The buildings were mostly erected between 1880 and 1890. Their present floor space is nearly 700,000 square feet. Their motive power is water. They are located on a quarter of a mile from the main tracks of the Connecticut Valley Railroad with which they are connected. They are also within a stone's throw of the Connecticut river, a navigable river at this point. At these docks a thousand tons or more can be floated at any time, in fact, an ocean steamer can load at these docks for any foreign country. The company is also enabled by its water connections to obtain all its supply of coal, iron, as well as its heavy incoming freight, which enables it to easily compete with any outside manufacturers.

The Cutaway Harrow Company is the sole manufacturer of Clark's machine of every kind, Cutaway Harrow, Disk Plow, Right Lap Gang Plow, Cutaway Sulky Disk Plow, Reversible Sulky Disk Plow, Complete turning Disk, Gang Plows and hundreds of sizes and kinds of Cutaways and Solid Disk Harrows. They also make the Celebrated Double Action Disk Harrow, the only Double Action Disk Harrow made, in fact, they are the only manufacturers of Clark's Cutaway or other machines for working any kind of earth. They also manufacture a very large line of general agricultural tools and other machinery, Reversible Sulky Disk Plows, Common Plows, Side Hill Plows, Root Cutters, Sampson Tobacco Presses and Jacks, Dutton Mower Knife and Machine Tool Grinders, also other Grinders, Acme Cutting Nippers, Cider Mills, and other machinery of which they ship hundreds of carloads annually to various points in this country, while they are also large exporters and shippers to every civilized country on the globe.



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of contamination of sources of water supply. Experts state that conditions of low water invariably bring with them typhoid and kindred fevers. The Department of Agriculture has an interesting little publication which shows how any housewife can furnish the household with perfectly pure water—distilled water—from which every possible germ or impurity has been eliminated. The apparatus for this distilling can be constructed at a cost of \$5. Upon the ordinary kitchen stove, it will furnish from seven to twenty gallons of water per week, according to the constancy of the fire. Distilling water is nothing but condensing the steam created by boiling it, and the apparatus in question is simply a connection between the spout of a tea kettle and a large cylinder into which the steam from the kettle rises, and as it becomes cooled, condenses into water and runs down into a tank below from which it can be drawn off for use.

Ordinary boiling of water makes it as wholesome and free from disease-producing bacteria as distilling it, but it leaves it with a somewhat flat taste, which is unpleasant to most people, at least until they have become used to it. It would be a wise precaution, however, to boil all the drinking water if there is the least question as to the source of supply. It is generally conceded among physicians that the use of distilled or boiled water for drinking purposes would insure much less disease.

The man has been caught who started the story that the largest tomato placed on exhibition this year in Missouri weighed 21 pounds, but that since the fruit had already killed the tree, it is impossible that any other specimens of the fruit will keep before 1904.

GUY E. MITCHELL.

Smoking Fish.

A dealer in sea food, who has had years of experience in handling fresh water fish as well, says the operation requires but ordinary skill and care. The raw fish are thoroughly cleaned and placed in salt brine for ten hours, or less, according to the degree of saltiness one desires them to attain. When taken out of the brine, they must be allowed to dry off thoroughly, after which they are placed in the smokehouse, over a hickory or maplewood and sawdust fire, or some hardwood sawdust alone. Pine sawdust will not do on account of its pungent odor. Here the fish may remain for from five to six hours, the length of time depending upon the owner's inclination to a deep salmon or dark color. Just before taking the fish from the smokehouse the fire should be started up so as to cook them. At this point particular care must be exercised in order that they may not overcook and fall apart.

Utilizing the Elm.

On many of our New England farms the elm tree is everywhere. It is generally classified among the nuisances that have to be endured. But any one who has ridden under the patriarchal trees which border the main street of old Hadley, or who has contemplated the magnificent specimens which wave their branches above many of the old farm houses of New England, must agree with the great French botanist, who proclaimed the elm to be the most magnificent vegetable product of the temperate zone. And here, before passing to discuss the value of this tree to the farmer, from a purely utilitarian standpoint, let me state, with almost reverent feeling (I have traveled hundreds of miles twice to enjoy the sight of the patriarch, as one of my principal objects) that there stands on the common in Wethersfield, Ct., what is doubtless the grandest representative of the race, a tree 125 feet in height, fifty-three feet in circumference of trunk, measured at the ground, with a diameter of 132 feet in the spread of its limbs, which, with an allowance of 12 feet for each individual, could throw protecting arms over an army of more than eleven thousand men.

Of the hundreds of elm trees scattered over the pastures and in every waste spot of my seed farm, I have opportunities to utilize outside their value as fuel but a very small number. I have found a limited call for them by wheelwrights for use as wheel hubs, and I have used them when saved into planks as flooring for my cow shed and oaken to stand on. Their tendency to warp renders boards or planks made from them comparatively worthless for any floor work, and their liability to rot where they come in contact with the earth makes them equally worthless for use in plank walks. Several years ago I found myself with a cord or so of elm logs on hand that averaged about ten inches in diameter, the smaller sticks having been disposed of to some young men at a low figure for firewood. Every farmer knows that elm logs of that size, owing to the intertwining of the tough fibres, are about unsplittable. It occurred to me one day, after the heap had lain for four or five years and the bark had long dropped off, to try their value in my fireplace. I did so and the result was very satisfactory, for the wood, being dry and somewhat decayed, helped in a little pine material to start with, burnt much like charcoal, with little flame but a bright red coal, until every particle of the ten-inch logs was consumed. This season I have been experimenting with green elm wood from trees cut down within a month. The logs used averaged about four inches in diameter and were burnt in my fireplace in the usual two-foot length. By using some pieces of the boxes or, better yet, three or four barrel staves, to start the fire, having first piled a few of the smallest

sticks of about an inch in diameter on top, I have very satisfactory results; the green elm has burned very readily, giving a good blaze and sending out an intense heat. There is just one precaution needed, as is the case with all varieties of green wood with which I am familiar; the fire needs to be well fed, so as to have a good body of wood on it all the time. I have found it a good plan to throw two or three fresh sticks over the back log and keep bringing these forward as I add new ones. Thus by using the big logs, when so old and dry as to be dry, and the smaller ones when green, without having had an axe battle with so obdurate a foe, beyond, subduing him to civilized lengths, wife and I, on Sabbath afternoons, get great enjoyment sitting before our library fire, which, by reason of its pleasant flame and cozy warmth of texture, allures more of our attention than do the books in hand.

J. J. H. GREGORY.

Essex County, Mass.

[In some localities it will pay well to haul or ship the logs to large wheelwright concerns which pay fair prices for elm logs of the required sizes, the supply often being unequal to the demand.—En.]

In Southern Vermont.

Streams are low, springs also. The Connecticut is very low for the time of year, which causes serious hindrance to business. In spite of snow on the ground and all the features of winter, one hears almost continually, "How dry it is," and the complaint is general throughout the State.

The Grange seems to be in a healthy and promising condition in this section. Fall Mountain at Bellows Falls, a new Grange, is in a flourishing condition. Robert Foster will be installed as Master for a second term Jan. 5, George Halliday secretary. Miss Nellie Brown lecturer. Saxtons River Valley Pomona, a new pomona formed Dec. 5 by Worthy State Master C. J. Bell, took in forty-one members at Saxtons River, Dec. 17. They also elected officers for the next year: Master, George Halliday, Bellows Falls; Lecturer, Mrs. J. H. Clark, Westminster West; Secretary, J. F. Alexander, Jr., Saxtons River. There are three Granges in this town of Rockingham—at Fall Mountain, Bellows Falls, Saxtons River.

Pleasant Valley is the oldest and a superb Grange, doing splendid work. It would gladden the hearts of the former principals of Vermont Academy at Saxtons River if they could see some of their former pupils' part in the literary work of Pleasant Valley Grange. I think they would say: "Surely our bread cast on the waters has returned after many days." Since their recent election, the following represent the Grange for 1904: Master, Bert Damon; Lecturer, Mrs. Charles Albee; Secretary, H. B. Webb, who has served them so well and so long. The Granges are doing good work in elevating the communities where they exist. "Whatever is good, pure and uplifting is legitimate Grange work," according to State Master Batchelder of New Hampshire.

CHARLES A. FARNSWORTH.

Bellows Falls, Vt.

Success in Grass Culture.

George M. Clark of Connecticut, known as the man who grows eight tons of hay per acre, addresses the agricultural students and others at the Rhode Island College, Kingston, Dec. 18. Mr. Clark said, in part, "that he was here to show the young men how to make money growing grass. It was not all book education. They must learn to do some one thing and do it well."

"The time has come when the farms must be more intensively cultivated. With the old methods we can no longer succeed. The more we stir the soil the better the crop. Intense cultivation is necessary for large crops of any kind; fully as necessary for the cultivation of all other crops as for grass. A fine seedbed doubles the product. Hay in this country is annually worth more than corn, cotton, wheat, oats and rye combined. Science must step in to keep up the supply. We must have intense cultivation to succeed. I move the earth on my fields in two months, just before seeding at least fifty times six inches deep, back and forth, up and down, over and under, and at the same time keep the surface true that we may cultivate to an even depth. This process reduces all sod or other vegetation to plant food, sprouts and kills out foul germs and lets in sunshine. This is intense cultivation."

"There is much talk about worn-out lands. If we will work ourselves and make our horses work with good tools, we will soon work new life into the soil. I want the young men and women to stay on the farms at home. All the good Government lands are occupied. There is no better land to be had than right here. Most of the old farms are large enough to divide. You can make money here. It is not necessary to have a large amount of land. Most of us are land poor. There are thousands of money-making farms in this country of less than ten acres each. As a rule, the small farms make the most money. Look at the prosperous truck gardeners. Intense cultivation does it."

"There are many facts in grass culture which it is well to remember. Red-top and timothy when sown together will produce 15 tons per acre more hay than when sown by themselves. These grasses work well together, but should be reseeded once in five or six years. They should be sown Sept. 1. This is the time they would reseed themselves. All of the seed on one piece should be sown the same day that all

may start together. I sow fourteen quarts of each kind to the acre. Half of each kind is sown each way. No other seed should be sown with these to raise the most valuable hay. Use all the yard manure you can before seeding. After seeding use nothing but bone, muriate of potash and nitrate of soda or their equivalent. Thereafter fertilize every crop whether first or second. The second crop should be cut just before frost and the field kept clean for winter. Fields well cared for and kept clean will never winter kill. Grass fields should never be pastured. No part of the grass stand can ever be recovered except by reseeded. Eternal vigilance is the price we pay to get the best results in grass culture. My first experimental crop on sixteen acres was over sixty-four tons and for many years the same field in two crops produced over one hundred tons. One flat section of seven-eighths of an acre covered with clay gravel and hardpan—no vegetation on it—at one seeding in fourteen years, twenty-eight crops, produced 114 tons. The outside cost of hay produced by this method does not exceed five dollars per ton for well-dried hay in the barn. Intense cultivation had done it. It will work wonders.

"This year, less than eleven acres of land, formerly as poor, rocky and bad as any in the county, produced over 167,000 pounds of well-dried hay in two crops—over 7½ tons per acre. For eighteen years it has produced a similar amount. You can do as well if you will." All present were much interested in Mr. Clark's lecture and many questions were asked at the close.

Anything can be raised from a farm easier than a mortgage.—E. F. R.

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All these females except three were sired by our present stock bull THE LAD FOR ME. Of the three one was a granddaughter of his, one a half-sister and the third was a granddaughter of GAY NINE ARCH. Write us what you want.

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